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# China Economic Trends

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# China Economic Trends

*A Comprehensive Review and Forecast of Trends in China's Economy Through 1990 and Beyond*

Spring 1986

**Rock Creek Research**
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## CHAPTER ONE - Introduction

The research results presented in this report review trends in virtually every major sector of China's economy. They imply that although China's economic growth will gradually slow and the reform movement will eventually moderate, China's economy in the late 1980s and early 1990s will be increasingly commercial and privately managed, and China by the year 2000 will have a GNP equivalent to Japan's today. In spite of the slowdown in China's economic growth late in 1985, both recovery in early 1986 and long-term economic trends since the initial implementation of reforms in 1979 show that official growth targets are conservative, as they have been in the past.

Keeping track of new trends and developments is difficult. The flood of information in the daily press has become so great, and the conflicting opinions so confidently argued, that relevant and significant developments are often not confirmed for a year or more, after careful research has presented the factual record in a meaningful way. The Rock Creek Research **China Economic Trends** report helps to shorten this period of uncertainty. **China Economic Trends** offers a thorough review of what is known about China's economy through the Spring of 1986, drawing conclusions about China's most likely future development path.

China's major recent economic trend has been the renewed growth of the domestic money supply in early 1986. This has helped industrial growth recover, after apparently successful government fiscal and monetary policies slowed overall expansion and reduced 1985's relatively high inflation. Grain price reforms and prospects for better weather promise a strong recovery from the 1985 decline in crop output. In international economics, concerns in 1985 that China would dramatically cut imports to correct for a large trade deficit were unfounded. China instead has used foreign loans to cover the deficit while promoting manufactured exports. Most importantly, throughout 1985 and well into 1986 reforms and experiments in economic management and policy have continued, in spite of the official position that 1986 would be a year of "consolidation."

In historical perspective, Deng Xiaoping's reforms and the economy's overall performance since the late 1970s represent a major break with China's Maoist past. Looking back even further to the late nineteenth and early twentieth centuries, it might be more accurate to say that Maoist China was a major stage in China's overall development process, bringing it from a protracted period of political decay, civil war, foreign invasion, and domestic collapse before 1949 through several decades of radical and excessive reforms. Ironically, and in spite of its excesses, this radical period laid a foundation for the current period of commercial and industrial expansion based on government "guidance," private incentives, and orderly international economic relations with the rest of the world.

Deng Xiaoping's economic and political reforms are dismantling Mao's centrally planned "command" economy faster than anyone had envisioned. The entire commune system is gone, and rural assets (land, animals, and machinery) have been turned over to individual farmers and their families. Nearly all industrial products have been removed from the central plan. In an increasing number of important dimensions, industrial enterprises are under the control of their individual managers. Profits, not fulfillment of physical output targets, have become the major criteria for industrial management success. Privately owned businesses have grown in number from 400,000 at the time of Mao's death to over 11 million by the end of 1985. Factories and construction companies have even begun selling negotiable bonds and securities, and bank branches have started experimental inter-bank lending at floating interest rates.

All of these domestic economic changes have forced the government to use increasingly indirect monetary and fiscal policies to influence the level of bank borrowing, growth of the money supply, overall demand, economic growth, and inflation. In numerous dimensions, Chinese economic policy is responding to cycles of industrial boom and slowdown just as policy in a market economy does, rather than resorting to the cruder commands of a centrally planned economy.

In terms of international trade, what was once a nearly closed economy now exports more than 8 percent of its GNP. What was once a centrally-rigged, subsidized foreign trade system is now so decentralized that state policy must manipulate exchange rates to discourage imports and promote export incentives for individual manufacturing enterprises. Foreign borrowing, lending, and arbitrage are increasingly common and are growing in sophistication. China has joined the World Bank, the IMF, and the Asian Development Bank, and is seeking GATT membership.

For China analysts, it is increasingly difficult to monitor all these changes and to evaluate which are legitimate and which are propaganda or wishfully romantic reportage. There are numerous sources of doubt and uncertainty about the health of these reforms and about the prospects for their success. Some of the concerns raised are legitimate and deeply rooted in fundamental characteristics of China and its economy, while others are based on short-term perspectives, partial truths, and limited familiarity with actual trends.

The most serious legitimate concerns for the success of Deng's program are brought on by the potential for political unrest in urban areas, as reforms raise food prices, close inefficient factories, and promote high private-sector incomes while state employee and party cadre salaries lag behind. Commercial freedoms allowing wholesale and retail independence immediately face a price structure inherited from Maoist China, which misleads producers and investors. Prices of scarce, much-desired comodities are too low and prices of plentiful low-quality goods are too high. Without this price structure, subsidies to many firms would have to be much larger in order to avoid worker layoffs and the unemployment currently unacceptable to Chinese policy-makers.

Price reform, in turn, can only proceed in inflationary cycles which risk urban political unrest, unless price subsidies--already large--continue to grow. In the short- and intermediate-term, official monitoring of market prices, periodic deflationary economic contractions, and price subsidies are being used to limit the inflationary impact of price reform policies. In the long run, however, the basic solution to problems of price reform, inflation, and price subsidies is increased productivity in industry, which in turn depends on price and management reforms. Success in these various reforms, then, requires their simultaneous implementation. The process is tricky and delicate. It requires good timing, attention to policy detail, a willingness to experiment, and the political strength to make mistakes and try something new. An important factor in this period of reform and economic transition, thus, is the quality of China's leadership and the political strength of the pro-reform elements among China's various power elites.

Very few specialists now believe that political opposition is strong enough to undo the reforms carried out so far, especially those in agriculture and commerce. Whether they involve internal political rebellion, military dissatisfaction, objections to "Western" morals and corruption, energy and transportation bottlenecks, or even the death of Deng Xiaoping, scenarios for undoing China's new organization are not persuasive and sound increasingly far-fetched.

A more immediate question is whether reforms can continue into new areas or whether they will stagnate. The concern most frequently voiced is that reforms will come to a standstill, unable to carry out their most difficult phase: the transformation of urban industrial enterprises into independent economic units with the freedoms to hire, fire, raise capital, set prices, and even go bankrupt if they are not successful. Resistance to these reforms understandably comes from the party cadres and government bureaucrats who oversee the traditional Chinese industrial ministries responsible for monitoring enterprises. These individuals, numbering in the hundreds of thousands, are literally fighting for their jobs. But there is an even more powerful coalition apparently arrayed against the cadres and bureaucracy, representing the combined forces of lower-level enterprise management and high-level national and provincial leadership. If there is a continued role for Deng Xiaoping, it is in adding to the strength of this coalition for reform.

However, explanations of China's prospects for reform success cannot be based only on narrow factional maneuvers and shifting coalitions. Much more fundamental forces seem to be at work--not only forces of fatigue with the past, but also forces of pride and hope that China can use its new system to attain goals its old system could not reach. Because of this, even Deng Xiaoping may no longer be essential. The promise of success is the strongest reason for China's leadership, whoever it may be, to consolidate the reform program and manage its evolution.

Success of the reforms is strongly influenced by a combination of fundamental conditions which make continued growth very likely. The most fundamental of these factors is the high quality of China's leadership, especially by Third World standards. Furthermore, China's labor force is literate and healthy. China has long experience with commercial and industrial management, again, especially by developing nation standards. The relatively egalitarian distribution of productive assets, especially agricultural land, can form the basis for an economic middle class. Central government control over individual enterprise management decisions is now already much weaker. Population growth has slowed significantly. China has a very strong natural resource base, not only in energy but also in metals and other raw materials. Large gains can be made from technology transfer, given China's relatively low starting position. China has strategic significance for major Western powers, which ensures their interest in development programs. Finally, there are many historical precedents in China for a period of sustained commercial expansion after epochs of chaos and consolidation. Given only a few of these factors, a country would enjoy good prospects for sustained development. China's endowment with all of them makes it difficult to believe that the current process will be easily stopped or undone by disruptive political elements.

Accounts in the media have exaggerated perceived political opposition to the reforms. Political, as opposed to economic, trends are difficult to measure, especially when freedoms of expression are in such a state of flux. The new "hundred flowers" campaign is encouraging new degrees of individual expression, and what may have been a significantly bold statement or publication a year ago might have very little national significance today. These political components of China's current transition are difficult to gauge directly, but economic components of programs already underway are increasingly well documented.

For China specialists, the most accurate measures of reform potential come from economic information. Economic trends are providing essential, no-frills verification of overall reform progress and their prospects for success. For even the most casual observer, recent changes in China's economy are too great to ignore. The proof of success or failure in economic reforms is found in the actual industrial, financial, trade, and farming trends observed month by month as they unfold.

The Rock Creek Research **China Economic Trends** Spring 1986 edition considers what China's economy has become and what it could be, in numerous dimensions, if current trends continue. Its ten substantive chapters and 58 tables review the most recent results for industry, energy, investment, banking, state finance, international trade, balance of payments, agriculture, commerce, transport, and population. All of these sectors are reviewed through the end of 1985, and many through the first quarter of 1986. At the same time, a computer model of China's economy, broken into 11 essential sectors, provides constant-priced and current-priced projections of China's economic future. The projections are not the mechanical results of a computer running itself. Rather, they are the result of painstaking consideration and evaluation, using the computer to maintain consistency among assumptions and technical economic requirements.

One conclusion that can be drawn from **China Economic Trends** is the abundance of reliable and useful data now available for China's economy. Historical data in the report are virtually all from official sources. In addition, numerous missions to China by international and government agencies, as well as the extensive statistical experience of Rock Creek Research staff, have verified Chinese methodology in collecting and summarizing statistics. By developing country standards, China's data are of high quality and are continuing to improve in both coverage and conceptual basis. The new Five Year Plan for 1986-90 has shifted from the Marxist measure of output, NMP (Net Material Product) to the Western measure, GNP (Gross National Product). (For China, GNP is virtually identical to a second, often preferred measure, GDP, or Gross Domestic Product.) China's economic statistics, rather than being a source of doubt about our knowledge of China's development progress, are increasingly a source for understanding and evaluating the success and pace of Deng Xiaoping's reforms.

Each of the chapters which follow has a similar format. After an EXECUTIVE SUMMARY, there are sections on TRENDS, POLICY, PROBLEMS, and PROSPECTS. Although no topic fits neatly into these four categories, they facilitate both the analysis of each sector and reference to the report's findings.

## CHAPTER TWO — Macroeconomy

### EXECUTIVE SUMMARY

**TRENDS**

- China's GDP growth recovered in the first quarter of 1986, following a marked slow-down in the second half of 1985.
- More than half of China's 1984-85 growth was due to very high levels of investment.
- Large trade deficits in 1985 and first quarter 1986 have driven down foreign exchange reserves and led to increased borrowing.

**POLICY**

- Fundamental management reforms transforming China from a centrally-planned economy to a market-oriented economy are largely responsible for the growth.
- China is continuing a process of conscious integration into the international economy.

**PROBLEMS**

- A foreign exchange shortage and energy and transport deficiencies remain constraints on China's development.

**PROSPECTS**

- By the year 2000, China will have a Gross Domestic Product roughly equal to Japan's today.
- Prospects are excellent for continuation of the reform program.

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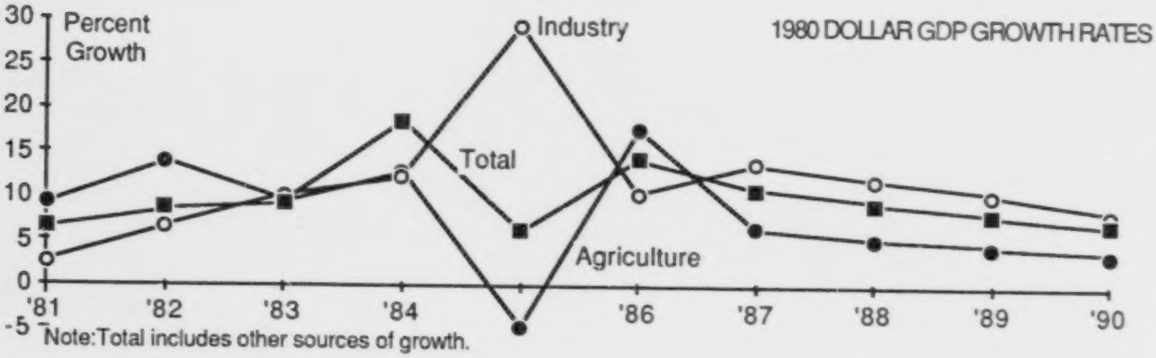
### TRENDS

China's overall economy since the late 1970s has shown a very strong growth record punctuated by policy-induced slowdowns and occasional years of poor weather. Although the second half of 1985 was a period of both deliberate industrial contraction and reduced agricultural growth, data for early 1986 describe a strong recovery and a return to the rapid growth trends of the preceding several years. The sources of this growth lie both in relatively high rates of investment and in improved productivity from a number of sources. Most of the productivity increases, in turn, are in one way or another related to the remarkable program of economic, political, and social reforms carried out over the past 7 years, reforms which continue to evolve and mature.

Diagram 2-1



Note:Total includes other sources of growth.

The reforms, first begun in agriculture, are rapidly converting the foundations of the Chinese economy from its original centrally-planned Stalinist form based on physical output targets to an increasingly de-facto market economy governed by financial incentives. China's international economic relations have broadened rapidly, and China in 1985 and early 1986 showed itself ready to borrow for imports when export revenues failed to grow fast enough. Nevertheless, China remains critically constrained by foreign exchange shortages, and for this reason, exports and imports of such basic commodities as grain and energy follow patterns different from what one would expect given existing conditions of domestic scarcity. The recent sharp drop in the price of oil has reduced oil's usefulness for earning foreign exchange, but an export emphasis remains in the energy sector.

The tables and text which follow serve as an introduction to the most basic macroeconomic trends, both through 1985 and as they are likely to continue into the future. For much more detailed discussions of the historical trends and prospects for the future, see the chapters on individual sectors which follow.

Table 2-1
GROWTH OF CHINA'S GROSS DOMESTIC PRODUCT, 1981-2005
(Percent Annual Average Growth*)

| | Agriculture | Industry | Other | Total | Per Capita |
|---|---|---|---|---|---|
| 1981 | 9.2 | 2.6 | 4.5 | 6.5 | 5.1 |
| 1982 | 14.0 | 6.6 | -2.0 | 8.6 | 7.1 |
| 1983 | 9.5 | 10.2 | 8.6 | 9.4 | 8.4 |
| 1984 | 12.8 | 12.3 | 41.3 | 18.5 | 17.3 |
| **1985** | **-4.7**** | **29.3**** | **9.7** | **6.2**** | **5.0** |
| 1986 | 17.7 | 10.4 | 12.5 | 14.4 | 13.2 |
| 1987 | 6.5 | 13.8 | 16.8 | 10.9 | 9.7 |
| 1988 | 5.2 | 12.0 | 14.4 | 9.3 | 8.1 |
| 1989 | 4.4 | 10.4 | 12.4 | 8.1 | 7.0 |
| **1990** | **3.6** | **8.3** | **10.9** | **7.0** | **5.8** |
| 1995 | 3.7 | 9.3 | 8.0 | 6.7 | 5.5 |
| 2000 | 3.2 | 7.4 | 6.6 | 5.6 | 4.5 |
| 2005 | 2.8 | 6.3 | 5.1 | 4.8 | 3.7 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

* NOTE: Based on GDP in constant 1980 U.S. dollars, converted at sectoral purchasing power parity exchange rates estimated by Rock Creek Research.

** NOTE: 1985 GDP for Agriculture and Industry are based on levels reported in the 1986-90 plan. They have been deflated to 1980 prices with gross value output price deflators, and reflect the volatility of GDP data in periods of rapid reform and irregular weather. Growth for total GDP is based on international prices rather than Chinese prices, which exaggerate the contribution of industry.

SOURCES: 1980-85 data calculated from official information in the State Statistical Bureau (SSB) **1985 Statistical Yearbook, Tongji** for December 1984, and sectoral detail in officially published summaries of the Seventh Five-year Plan (1986-90).

Table 2-1, above, shows that China's Gross Domestic Product (GDP) accelerated strongly from 1980 to 1984, before slowing considerably in 1985, a result mainly of the poor performance in agriculture. Although industry's output growth for all of 1985 was remarkably strong, the annual data hide the severity of the industrial decline in the second half of the year (for details, see Chapter 3, below, on industry). Table 2-1 is also significant for the degree to which it reflects official information on sectoral GDP, which until very recently has been unavailable. The official Chinese measure of national output through 1985 has been Net Material Product (NMP), which suffers from important omissions; the appearance of GDP statistics makes comparisons with other economies more meaningful.

GDP measures value added and is very different from the gross output statistics so frequently cited in official sources. Gross output contains serious degrees of double-counting and is not a reliable measure of real growth. It is also useful to note that growth rates in Table 2-1 are based on output figures in U.S. dollars which have been converted at rates which reflect the low quality and over-pricing of much of China's industrial output. As a result, industrial growth is given much less importance in average growth for the whole economy. For this reason, growth rates shown differ from officially published data, and are a more accurate measure of China's economic performance. (For official data measured in Chinese yuan, see the Rock Creek Research **1986 China Statistical Handbook.**)

Table 2-2
CHINA'S GROSS DOMESTIC PRODUCT, 1980-2005
(Billion Constant 1980 U.S. Dollars)

| | Agriculture | Industry | Other | GDP Total | GDP per Capita* |
|---|---|---|---|---|---|
| 1980 | 131.0 | 60.0 | 57.7 | 248.7 | 252 |
| **1985** | **192.0** | **104.9** | **99.3** | **396.2** | **379** |
| 1990 | 273.5 | 176.5 | 186.0 | 636.0 | 575 |
| 1995 | 328.0 | 275.8 | 273.9 | 877.8 | 751 |
| 2000 | 383.1 | 395.1 | 376.2 | 1,154.4 | 936 |
| 2005 | 440.9 | 535.6 | 483.1 | 1,459.6 | 1,120 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
* NOTE: Units for GDP per capita are constant 1980 U.S. dollars per person.
SOURCES: 1980-85 data calculated from official information in the State Statistical Bureau (SSB) **1985 Statistical Yearbook, Tongji** for December 1984, and sectoral detail in officially published summaries of the Seventh Five-year Plan (1986-90).

The severity of the decline in 1985's agricultural output was the most unexpected element in China's 1985 economic record and resulted from a combination of poor weather and dramatic incentive reforms--reforms which had a strong and unanticipated effect on cropping patterns, especially for grain. Policy adjustments and a return to normal weather in 1986 would result in average growth over the two-year 1985-86 period of roughly 7 percent, which although lower than in the 1981-84 period would still be high by Third-World standards. Patterns and policies in agriculture, however, have political significance and deserve careful attention (for important details, see the analysis in Chapter 8).

Overall, then, trends in 1985 represented something of a disruption in the pattern of steady economic growth since 1981, and the nature and degree of the 1986 recovery will give a good indication of the effectiveness and flexibility of Chinese policy-makers' new macroeconomic controls. Cropping patterns and trends in the first four months of 1986 imply the recovery will be a strong one, and Tables 2-1 and 2-2, above, present a consistent picture of what China's growth will be like through the end of the century under these circumstances. These possibilities are discussed briefly in the **TRENDS** section, below.

Table 2-2, above, presents actual values of China's overall and per-capita GDP from 1980 to 2005. Two important factors to note are the very low level of 1985 per capita income, making China one of the poorest countries in the world, and the large size of China's overall economy in the early twenty-first century, equivalent to Japan's today. This projection of China's future economic size is based on a continuation of current trends, with gradual moderation, through the 1990s. Such a continuation is likely, given China's continued high investment rates and increased productivity resulting from ownership, management, and price reforms. Tables 2-3 and 2-4, below, show historical and projected output trends as measured in traditional Chinese gross output statistics.

Table 2-3
GROSS VALUE OUTPUT GROWTH (Percent Annual Average)

| | Agriculture | Industry | Agriculture & Industry | Other Output | Total Gross Output |
|---|---|---|---|---|---|
| 1981 | 5.9 | 4.5 | 4.9 | 2.6 | 4.5 |
| 1982 | 11.3 | 7.8 | 8.8 | 13.5 | 9.5 |
| 1983 | 7.7 | 11.2 | 10.2 | 10.9 | 10.3 |
| 1984 | 12.4 | 16.3 | 15.2 | 7.2 | 13.9 |
| **1985** | **3.0** | **21.3** | **16.4** | **15.2** | **16.2** |
| 1986 | 10.1 | 11.0 | 10.8 | 9.0 | 10.5 |
| 1987 | 6.8 | 15.0 | 13.0 | 14.0 | 13.2 |
| 1988 | 5.8 | 13.4 | 11.7 | 13.3 | 12.0 |
| 1989 | 5.3 | 12.5 | 10.9 | 12.1 | 11.1 |
| **1990** | **4.8** | **11.5** | **10.2** | **10.9** | **10.3** |
| 1995 | 4.2 | 11.0 | 9.9 | 7.7 | 9.5 |
| 2000 | 3.6 | 9.1 | 8.3 | 6.2 | 8.0 |
| 2005 | 3.3 | 7.8 | 7.3 | 3.7 | 6.9 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: Agriculture and industry, 1980-84 from State Statistical Bureau (SSB) **1985 Statistical Yearbook**, 1985 data are from the SSB communique on 1985 plan fulfillment; construction, transport, and commerce in "Other" for 1980-84 are from the same sources as for agriculture and industry; "non-productive" services in "Other" are Rock Creek Research estimates based on trends in physical output indicators reported in official statistics.

Referring to Tables 2-3 and 2-4, it is immediately obvious that these projections show much higher output than the official Chinese target of quadrupling gross output of agriculture and industry between 1980 and 2000. In fact, trends in Table 2-4 show that this traditional planning measure of output will have quadrupled well before 1995 and increased nearly 7-fold by 2000. This difference between official target slogans and projected growth is the result of the conservative nature of original targets, the very rapid growth since they were announced in the early 1980s, and the large element of double counting in the gross value output measure, which in general increases over time and inflates the degree of actual growth. It is much more difficult to quadruple GDP, and more difficult still to quadruple per capita GDP. In recent months Deng Xiaoping, China's most powerful leader, has speculated about quadrupling per capita GDP between 1980 and 2000. The Rock Creek Research projections in Table 2-2 show that the output levels envisioned in these tables fall somewhat short of quadrupling per capita GDP during that period. In all, these projections are a good baseline for considering what China's economy will be early in the twenty-first century.

Table 2-4
GROSS VALUE OUTPUT (Billion 1980 Yuan)

| | Agriculture | Industry | Agriculture & Industry | Other Sectors | Total Gross Output |
|---|---|---|---|---|---|
| 1980 | 198 | 522 | 720 | 134 | 854 |
| **1985** | **290** | **923** | **1,213** | **214** | **1,427** |
| 1990 | 399 | 1,677 | 2,076 | 375 | 2,450 |
| 1995 | 489 | 2,830 | 3,320 | 543 | 3,863 |
| 2000 | 584 | 4,371 | 4,955 | 733 | 5,688 |
| 2005 | 686 | 6,376 | 7,062 | 880 | 7,941 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
SOURCES: Agriculture and industry, 1980-84 from State Statistical Bureau (SSB) **1985 Statistical Yearbook**, 1985 data are from the SSB communique on 1985 plan fulfillment; construction, transport, and commerce in "Other" for 1980-84 are from the same sources as for agriculture and industry; "non-productive" services in "Other" are Rock Creek Research estimates based on trends in physical output indicators reported in official statistics.

One of the reasons China's per capita GDP is growing so fast is the slow growth of its population, the result of an aggressive family planning program. Table 2-5, below, shows China's two most significant demographic trends: the success in controlling overall population growth and the extraordinary pace at which the rural population is urbanizing. Beginning in the 1970s, China's crude population growth rate began to slow significantly, and by the early 1980s it was approaching 1 percent per year. Although there is evidence of some relaxation of the one-child policy for both urban and rural families, the projections show that China will come close to attaining its goal of limiting total population to 1.2 billion by the year 2000.

Much more dramatic than the gradual slowing of overall population growth is the explosion in China's urban populations, as rural peasants move to towns and as areas once considered rural acquire the official status and commercial significance of urban areas. In both cases, the rapid increase in city dwellers must be having a major influence on work and consumption patterns, ultimately further lowering the population growth rate itself, given that the natural rate of population increase in urban areas of China has been between one-third and one-fourth that in rural areas for much of the early 1980s.

Equally as significant as the shift to urban living itself is the relatively well-to-do status of the new urban dwellers by Third World standards. Although the evidence is largely anecdotal, it appears that many farmers with linkage to land under the responsibility system (China's de-facto land reform), or at least their family members, are moving to towns, bringing with them some economic basis for living and working there. In other words, because of their substantial economic foundation in rural areas, these new town dwellers can form the basis for an expanded middle class. This is very much the pattern in other East Asian economies which have undergone land reform (South Korea, Taiwan, and even Japan), but very different from the mass migration of impoverished landless peasants to the urban areas of India, Indonesia and other heavily populated poor countries with unreformed land tenure systems.

Table 2-5
CHINA'S POPULATION GROWTH AND URBANIZATION

| | Population (Million) | | | Growth (Percent) | | | Share (Percent) | |
|---|---|---|---|---|---|---|---|---|
| | Rural | Urban | Total | Rural | Urban | Total | Rural | Urban |
| 1980 | 796 | 191 | 987 | .7 | 3.5 | 1.2 | 80.6 | 19.4 |
| 1981 | 799 | 202 | 1,001 | .4 | 5.4 | 1.4 | 79.8 | 20.2 |
| 1982 | 804 | 212 | 1,015 | .6 | 4.9 | 1.5 | 79.2 | 20.8 |
| 1983 | 784 | 241 | 1,025 | -2.5 | 14.0 | .9 | 76.5 | 23.5 |
| 1984 | 705 | 330 | 1,035 | -10.1 | 36.8 | 1.0 | 68.1 | 31.9 |
| **1985** | **643** | **404** | **1,046** | **-8.8** | **22.4** | **1.1** | **61.4** | **38.6** |
| 1986 | 599 | 459 | 1,058 | -6.8 | 13.7 | 1.1 | 56.6 | 43.4 |
| 1987 | 576 | 494 | 1,070 | -3.8 | 7.5 | 1.1 | 53.8 | 46.2 |
| 1988 | 560 | 522 | 1,082 | -2.8 | 5.7 | 1.1 | 51.8 | 48.2 |
| 1989 | 550 | 544 | 1,094 | -1.8 | 4.2 | 1.1 | 50.3 | 49.7 |
| **1990** | **546** | **560** | **1,106** | **-.8** | **3.0** | **1.1** | **49.3** | **50.7** |
| 1995 | 522 | 647 | 1,168 | -4.4 | 15.4 | 5.6 | 44.6 | 55.4 |
| 2000 | 526 | 708 | 1,234 | .9 | 9.4 | 5.6 | 42.7 | 57.3 |
| 2005 | 542 | 761 | 1,303 | 3.0 | 7.5 | 5.6 | 41.6 | 58.4 |

NOTE: 1985 is the last year for which total population statistics are based on historical data. 1984 is the last year for historical rural and urban data. Other statistics through 2005 are from the Rock Creek Research China economic model.

SOURCES: 1984 statistics are from the State Statistical Bureau **1985 Statistical Yearbook**. 1985 total population figure is from the SSB March 1986 communique on 1985 plan fulfillment.

The rural-urban population shift is also one of many factors contributing to the increased efficiency of China's productive capacity, because under the numerous incentive and industrial management reforms there appears to be a shift from capital-intensive to more labor-intensive methods. In general, China's overall economic growth comes from a combination of increased capital stock and improved productivity for that capital stock. In principle, this increase in capital stock is a relatively straightforward result of investment in plant, equipment, and infrastructure, with allowances for replacement of capital stock no longer usable. The increase in productivity of that capital stock, however, is a complex combination of a number of factors, including new technology, improved labor skills, using labor to do jobs previously done by machines, better management of enterprises, an economic environment with more incentives, and even good weather.

Although the increase in productivity is difficult to measure directly, it can be estimated from historical data, given the national level of investment (equivalent to what the economy does not consume), estimates of historical productivity, and actual output changes. Naturally, the importance of investment is very great. Table 2-6, below, combines an analysis of China's high savings and capital accumulation rate with estimates of investment productivity to determine how much of China's economic growth is due to investment and how much to other factors, such as increased labor intensity, new technology, and more efficient management.

Table 2-6
SOURCES OF GROWTH

| | Savings (Percent) | | Capital Productivity | | NMP* Growth (Percent) | | |
|---|---|---|---|---|---|---|---|
| | Out of NMP* | Out of GDP* | (Output/ Capital Stock) | Percent Change | Total | due to Savings | due to Other |
| 1981 | 28.5 | 23.4 | .222 | -2.2 | 4.9 | 7.2 | -2.3 |
| 1982 | 29.0 | 24.0 | .227 | 2.3 | 8.3 | 6.3 | 2.0 |
| 1983 | 29.7 | 24.6 | .232 | 2.2 | 9.8 | 6.6 | 3.2 |
| 1984 | 31.2 | 25.0 | .243 | 4.7 | 13.8 | 6.9 | 6.9 |
| **1985** | **33.4** | **26.8** | **.253** | **4.3** | **12.2** | **7.6** | **4.6** |
| 1986 | 32.0 | 25.6 | .263 | 3.9 | 12.7 | 8.5 | 4.2 |
| 1987 | 31.5 | 25.0 | .270 | 2.4 | 11.1 | 8.4 | 2.6 |
| 1988 | 31.3 | 24.7 | .272 | 1.0 | 9.5 | 8.5 | 1.0 |
| 1989 | 30.8 | 24.1 | .272 | -.1 | 8.4 | 8.5 | -.2 |
| **1990** | **29.7** | **23.1** | **.268** | **-1.4** | **6.9** | **8.4** | **-1.5** |
| 1995 | 29.3 | 22.1 | .252 | -1.2 | 6.8 | 8.1 | -1.3 |
| 2000 | 29.9 | 21.9 | .229 | -1.9 | 5.5 | 7.6 | -2.1 |
| 2005 | 30.3 | 21.5 | .202 | -2.4 | 4.5 | 7.1 | -2.6 |

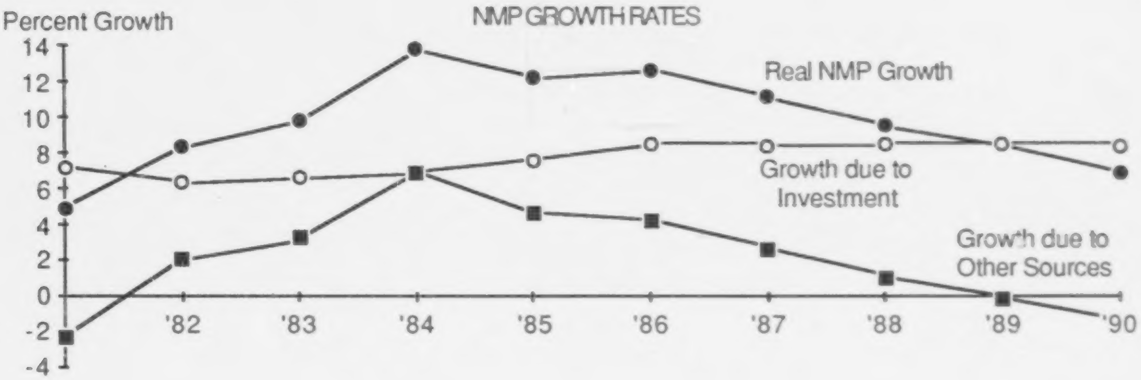
NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

* NOTE: NMP stands for Net Material Product, the Chinese/Marxist equivalent to Gross Domestic Product (GDP), the usual measure of value-added in the West.

SOURCES: NMP savings 1980-84 from State Statistical Bureau **1985 Statistical Yearbook**, 1985 from **Beijing Review** April 14, 1986; GDP savings are Rock Creek Research calculations based on estimated GDP/NMP ratios. Capital productivity and growth are from RCR research on productivity trends since 1949. Real NMP growth, 1981-85 is from the **1985 Statistical Yearbook**, and 1985 from the SSB March 1986 Communique on 1985 plan fulfillment. Growth due to savings (investment) and other sources are calculated based on other information in the table.

China's rate of saving and capital accumulation--the share of output not consumed but rather dedicated to plant and equipment for future output--is relatively high by world standards, especially poor-country standards. Because the official Chinese savings rate data are based on NMP (Net Material Product), which is smaller than GDP, the usual output measure in the West, Table 2-6 gives China's savings rate by both measurements. In each case, China's savings rate is close to or greater than 30 percent of output. As the quality of investment goods improves, this high rate of capital accumulation should continue to support rapid rates of output growth.

Diagram 2-2



As Table 2-6 also shows, however, not all of China's growth is explained by increases in capital stock. Other sources of growth mentioned above are also extremely important for understanding current trends in China's economic output. Historical data through 1985 show that non-investment sources of growth have at times accounted for as much as one half of China's total increase in output.

The historical relationship through 1985 between growth due to investment and growth due to other factors is useful for projecting growth into the future. Table 2-6 reflects rather conservative assumptions about both investment and productivity change from 1986 through 2005. If savings (investment) as a share of output declines gradually while growth in capital productivity also slows and then declines, the result is the output patterns described in all the tables in this chapter. In other words, without such conservative assumptions, if China is somehow able to sustain the current growth rates in capital productivity through the 1990s, total output growth will be even more rapid than projected and much more rapid than in official growth targets.

While the domestic economy's growth is the most fundamental of China's economic trends, the rapid growth in China's international economic transactions is equally as dramatic. Tables 2-7 and 2-8, below, review the recent record in China's trade, current account, and capital account balances.

China's international trade and borrowing from late 1984 through early 1986, with growing imports and large trade deficits, showed a rather dramatic shift away from the pattern of surpluses enforced in the early 1980s.

Although trade data in April 1986 indicate roughly balanced trade on an FOB basis due to a recovery in exports and slowed import growth, given the large deficit in the first quarter of 1986, it is difficult to say if the second half of 1986 will again see more balanced trade due to recovered export earnings. Whatever the case, the most important trade trend remains China's continued importation of machinery and equipment to enhance investment productivity. In this sense, foreign trade trends have been strongly influenced by the domestic economic reforms and China's resulting ability to successfully absorb increased amounts of foreign technology. Annual trends and their projection into the future are shown in Table 2-7 below. For greater detail, see Chapter 7, below.

As a result of the large 1985 trade and current account deficits shown in Table 2-7, China both drew down its foreign exchange reserves and began to borrow abroad in significant amounts. Overall, Table 2-8, below, shows that the 7.6 billion dollar current account deficit in 1985 was paid more by borrowing than by drawing down reserves.

Table 2-7
CHINA'S CURRENT ACCOUNT BALANCE, 1980-2005
(Billion Current Dollars)

| | Exports FOB | Imports FOB | Trade Balance | Invisibles Net | Current Account Balance |
|---|---|---|---|---|---|
| 1980 | 18.1 | 17.8 | .3 | .3 | .6 |
| 1981 | 22.0 | 19.4 | 2.6 | .4 | 3.0 |
| 1982 | 22.3 | 16.9 | 5.4 | 1.4 | 6.8 |
| 1983 | 22.2 | 18.7 | 3.5 | 2.3 | 5.8 |
| 1984 | 26.0 | 24.0 | 2.0 | 2.0 | 4.1 |
| **1985** | **27.4** | **38.5** | **-11.1** | **3.5** | **-7.6** |
| 1986 | 24.2 | 26.1 | -2.0 | 2.8 | .8 |
| 1987 | 26.4 | 30.4 | -4.0 | 3.1 | -.9 |
| 1988 | 28.9 | 38.2 | -9.3 | 3.7 | -5.6 |
| 1989 | 32.3 | 43.1 | -10.8 | 4.1 | -6.6 |
| **1990** | **36.7** | **48.8** | **-12.2** | **4.7** | **-7.4** |
| 1995 | 56.1 | 71.3 | -15.3 | 7.0 | -8.3 |
| 2000 | 90.2 | 103.1 | -12.9 | 10.6 | -2.3 |
| 2005 | 144.1 | 148.0 | -3.9 | 16.1 | 12.2 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
SOURCES: 1980-81 trade and invisibles are calculated from official Ministry of Foreign Trade, China Customs Administration data, and the Bank of China, as reported in a variety of sources. 1982-84 trade and invisibles are from the Bank of China's September 1985 communique on China's capital and current accounts. 1985 data are from the official customs statistics reported in the State Statistical Bureau's monthly statistical bulletin.

It is not certain what China's trade and payments policy will be in 1986-87. To a certain degree the deficits from late 1984 through early 1986 were as much the result of faltered exports as booming imports. Faltered exports, in turn, were the result of enterprise management reforms which made it unattractive for domestic manufactures to export, given high domestic prices and China's overvalued exchange rate. Under these conditions, the Chinese leadership seems to have decided to seek a solution to the deficit problem by emphasizing export earnings rather than by making cutbacks in total imports. If this is the case, imports can be expected to continue to grow, but at a slower pace, while exports accelerate and reduce or eliminate the trade deficit. The projections in Tables 2-7 and 2-8 assume that this process will occur rather rapidly in 1986 but that the trade deficit will remain significant.

Table 2-8
CHINA'S CAPITAL ACCOUNT BALANCE, 1980-2005
(Billion Current U.S. Dollars)

| | Lending (Net) | Increase in Reserves | Capital Account Balance | Errors & Omis-sions | Foreign Exchange Reserves | Net Foreign Debt |
|---|---|---|---|---|---|---|
| 1980 | -1.8 | .1 | -1.7 | 2.1 | 1.9 | .9 |
| 1981 | .7 | 2.5 | 3.2 | -.6 | 4.4 | 1.6 |
| 1982 | -.3 | 6.3 | 6.0 | .9 | 10.7 | 1.3 |
| 1983 | .2 | 3.6 | 3.9 | 1.9 | 14.3 | 1.5 |
| 1984 | 1.0 | .0 | 1.1 | 3.0 | 14.4 | 2.5 |
| **1985** | **-4.1** | **-3.4** | **-7.6** | **.0** | **11.0** | **6.6** |
| 1986 | 4.1 | -3.3 | .8 | .0 | 11.1 | 2.5 |
| 1987 | 1.0 | -1.9 | -.9 | .0 | 9.2 | 1.5 |
| 1988 | -7.3 | 1.7 | -5.6 | .0 | 10.9 | 8.7 |
| 1989 | -7.3 | .7 | -6.6 | .0 | 11.6 | 16.1 |
| **1990** | **-8.3** | **.9** | **-7.4** | **.0** | **12.5** | **24.4** |
| 1995 | -14.0 | 5.8 | -8.3 | .0 | 18.3 | 38.5 |
| 2000 | -10.4 | 8.2 | -2.3 | .0 | 26.4 | 48.9 |
| 2005 | .7 | 11.5 | 12.2 | .0 | 37.9 | 48.2 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
SOURCES: 1980-81 lending and reserve statistics are based on Bank of China data as reported in a variety of sources. 1982-84 lending, reserves and errors are from the Bank of China's September 1985 communique on China's capital a current accounts. 1985 data on reserves are from official sources as presented in the International Monetary Fund's **International Financial Statistics.** 1985 lending is calculated from the other data assuming no errors and omissions. The initial 1980 net foreign debt level is a Rock Creek Research estimate.

The considerable attention paid to China's balance of payments and debt in both official policy and outside commentary reflects the over-arching importance of foreign exchange shortages for China's economic development. Although the greatest significance of this shortage is probably its limitations on the importation of modern technology, its influence can also be seen in China's trade patterns in grain and energy. For both these important commodity categories, China consumes less and exports more than she would if foreign exchange were not in such short supply. The history of these trade and consumption patterns and their projections into the future are presented in Tables 2-9 and 2-10, below.

Table 2-9
CHINA'S GRAIN BALANCES
(Million Metric Tons)

|  | Production | Intermediate Use | Final Consumption | Total Consumption | Exports | Imports |
|---|---|---|---|---|---|---|
| 1980 | 320.6 | 94.3 | 237.3 | 331.6 | 1.0 | 12.1 |
| 1981 | 325.0 | 110.2 | 227.3 | 337.5 | .8 | 13.3 |
| 1982 | 354.5 | 137.2 | 232.6 | 369.8 | .8 | 16.2 |
| 1983 | 387.3 | 157.0 | 242.7 | 399.7 | 1.2 | 13.5 |
| 1984 | 407.3 | 165.0 | 249.5 | 414.5 | 3.2 | 10.4 |
| **1985** | **379.0** | **141.9** | **233.8** | **375.7** | **9.3** | **6.0** |
| 1986 | 404.4 | 172.0 | 247.4 | 419.4 | 1.8 | 16.9 |
| 1987 | 408.2 | 177.8 | 245.0 | 422.7 | 2.2 | 16.7 |
| 1988 | 408.0 | 183.1 | 241.2 | 424.4 | 2.2 | 18.6 |
| 1989 | 406.6 | 187.2 | 237.3 | 424.5 | 2.3 | 20.2 |
| **1990** | **404.4** | **190.7** | **233.4** | **424.1** | **2.4** | **22.0** |
| 1995 | 416.6 | 227.2 | 213.2 | 440.4 | 2.1 | 25.9 |
| 2000 | 403.2 | 233.6 | 198.1 | 431.7 | 1.9 | 30.5 |
| 2005 | 390.3 | 236.6 | 187.4 | 424.0 | 1.8 | 35.5 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: Grain output, 1980-85, from State Statistical Bureau **1985 Statistical Yearbook** and March 1986 communique on 1985 plan fulfillment. Exports and imports, 1982-85 from official customs statistics, 1980-81 converted from value data with estimated unit value ratios. Consumption breakdown between intermediate and final use from input-output calculations.

The grain balances presented above in Table 2-9 show not only the effects of limited foreign exchange; they also reflect China's critical shortage of arable land and the low financial return per hectare of land sown to grain compared to the return from other crops. Because of this revenue differential, farm management reform tends to encourage shifting land out of grain cultivation. As a result, with output limited by available land and imports of grain limited by shortages of foreign exchange, domestic consumption is caught in the squeeze.

Not only is domestic grain consumption overall caught in a squeeze, with the increased emphasis on animal husbandry and the development of feed grain processing, there are increasingly competing claims for domestic grain uses. One result of this dilemma is presented in Table 2-9's projections, which show both domestic production and final consumption of grain (as a staple food) severely constrained through the remainder of the century. The only alternatives to this scenario would have to come from much higher effective grain prices (to discourage planting shifts to non-grain crops) or the commitment of large amounts of foreign exchange to grain imports. At present, neither of these scenarios seems as likely as that presented in Table 2-9. The evolution of China's grain balances also has significant political repercussions (see Chapter 7, below, for additional comments on this topic.)

Table 2-10
CHINA'S ENERGY BALANCES
(Million Metric Tons of Standard Coal Equivalent)

| | Production | Intermediate Use | Final Consumption | Total Consumption | Exports | Imports |
|---|---|---|---|---|---|---|
| 1980 | 620.3 | 350.1 | 253.3 | 603.4 | 17.6 | .7 |
| 1981 | 615.8 | 379.7 | 219.4 | 599.2 | 16.8 | .2 |
| 1982 | 642.1 | 401.8 | 222.3 | 624.1 | 18.4 | .4 |
| 1983 | 687.9 | 412.5 | 257.2 | 669.7 | 18.5 | .3 |
| 1984 | 751.5 | 431.7 | 294.7 | 726.5 | 25.3 | .4 |
| **1985** | **811.6** | **439.3** | **338.2** | **777.5** | **34.9** | **.7** |
| 1986 | 864.3 | 484.1 | 346.1 | 830.2 | 35.6 | 1.5 |
| 1987 | 929.2 | 516.4 | 378.0 | 894.5 | 36.5 | 1.8 |
| 1988 | 984.9 | 538.4 | 411.2 | 949.6 | 38.3 | 3.0 |
| 1989 | 1,043.0 | 564.7 | 444.1 | 1,008.9 | 39.8 | 5.6 |
| **1990** | **1,106.1** | **599.6** | **477.7** | **1,077.2** | **41.4** | **12.5** |
| 1995 | 1,445.7 | 768.0 | 662.8 | 1,430.7 | 46.8 | 31.9 |
| 2000 | 1,844.7 | 969.1 | 870.6 | 1,839.7 | 64.1 | 59.0 |
| 2005 | 2,245.0 | 1,167.4 | 1,095.9 | 2,263.3 | 70.7 | 89.0 |

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: 1980-84 production, total consumption and trade data from State Statistical Bureau **1985 Statistical Yearbook** and official **Customs Statistics**, various issues. 1985 production from SSB March 1986 communique on 1985 plan fulfillment; 1985 trade based on official customs statistics. The breakdown of domestic consumption between intermediate and final use is based on input-output calculations.

In addition to grain, China's energy consumption and trade patterns would be quite different were it not for the chronic foreign exchange shortage. Table 2-10, above, presents the relevant trends in China's energy balances. Although China has abundant energy reserves, they are isolated and expensive to extract. As a result, China has a domestic energy shortage. Nevertheless, given the attractive world market for oil through 1985, China has long been a net energy exporter. The need to earn foreign exchange has outweighed domestic demand considerations. It is also significant that petroleum exporting provinces and ministries, which want foreign exchange for their own projects, have in general been different from the regions and ministries in need of energy but unwilling to pay hard currency to domestic suppliers. Finally, China's foreign trade with Japan for many years hinged critically on an agreement through which Chinese imports of high quality Japanese steel were paid for with crude oil exports.

As oil prices weakened in 1984-85, China's crude oil export volume grew very rapidly in an unsuccessful attempt to maintain revenue levels. With the collapse of world oil prices in early 1986, China ceased increasing oil exports and abandoned the oil-for-steel arrangement. Data through April, however, show that coal exports have increased dramatically. China has apparently made the strategic decision that with the price of world oil so low, domestic energy needs should now have greater weight in the decision about oil export levels. Nevertheless, foreign exchange needs will continue to make net energy exports an important part of China's trade pattern until late in the century, by which time the domestic demand for refined petroleum products will have grown too large to ignore and will require imports at levels exceeding exports of crude and coal.

It is useful to note that the domestic energy shortage would be more severe than that shown in Table 2-10 were it not for the relatively rapid growth of energy output projected. The Chinese targets of doubling energy output between 1980 and 2000 are most certainly conservative. For a fuller discussion of this question, see Chapter 4 on energy. In addition to relatively rapid growth in energy output, domestic shortages will also be eased through significant conservation, given that China is arguably the least efficient consumer of energy in the world. In the early 1980s, overall output growth has far out-paced the growth in primary energy supplies. Furthermore, the projections in Table 2-10 are made without assuming major offshore oil finds. Should such finds occur, China's international energy position would change dramatically.

This concludes the relatively brief overview of China's macroeconomic trends through 1985 and their projection into the future. In most cases they are the result of China's broad shift in economic and social policy since the death of Mao Zedong (1976). These policies, with many adjustments and qualifications, are continuing into the latter 1980s. A summary of the overall policy direction is given below. For greater detail, see the various chapters which follow.

## POLICY

Looking at China's overall economy, two basic policy trends stand out: reforms in domestic economic management, and conscious integration into the international economic community. Within these two broad national policy themes, numerous major dimensions have evolved, and in several cases the reform policies themselves have created complications requiring additional corrective policies.

Before looking at separate domestic and international economic policy trends, however, it is instructive to recognize a fundamental operational dimension of the reforms, which does best to borrow its name from China's foreign policy rhetoric: "one country, two systems." In this case, "one country, two systems" does not mean one China with a socialist mainland and capitalist Taiwan and Hong Kong, but rather refers to one mainland economy with a centrally managed core and a growing market periphery. In virtually every sector the process of reform has worked in the same way, with experimental steps taken in a few locations or enterprises, followed by a spread of the successful measures to small and medium-size units around the country, and with eventual final changes occurring in the major state-owned enterprises most directly under ministerial control.

Currently, nearly every sector of China's economy reveals the two-system approach, which has progressed a great deal where it is popular, such as in agriculture, but very little in more difficult areas, such as the urban labor market. The two-system evolution, then, is China's way of introducing radically new principles in economic management while causing the least disruption to more rigid institutions of the older centrally planned order.

Recognizing this division, any summary of China's broad reform policies should not only focus on the characteristics of the new systems being introduced, but should also recognize their interrelations with and influences on the older institutions and management regimes they supplement and challenge. With this dynamic element in mind, the brief outline below mentions only a few major characteristics of China's emerging new economic order, both domestic and international.

Out of the wide range of new domestic policies, two unifying principles have gradually emerged: private profit incentives at the level of day-to-day production, and competition among different units. Profit incentives have taken the place of physical output targets, and competitive choice has replaced direct allocation of inputs and guaranteed purchases of final production. Profit incentives and competition, in turn, include, make possible, or bring about many other more publicized aspects of the domestic reform movement, such as price, banking, investment and construction, technology modernization, wage, and housing reforms, and even the introduction of indirect monetary and fiscal policies for controlling inflation and the pace of economic expansion. Without elements of profit incentive or competition, few if any of these reforms would have substance or much record of success.

One of the most striking and fundamental examples of the influence of profit incentives and competitive choice is that of price reform. Without accountability for profits, price reform by central government command would result in increased losses and subsidies rather than a realignment of resources reflecting national patterns of demand and resource scarcity. Without competition or choice of markets, enterprises and farmers would be guaranteed or restricted to transactions with traditional bureaucratic counterparts and would have neither a reason to reduce prices nor the opportunity to raise them. Within the Chinese reform environment, however, both profit incentives and competitive choice have been essential in guiding and propelling price reform. In many cases, centrally directed price reform in the planned economy came only after competition and profit motives revealed appropriate price adjustments in the more competitive economy.

For a more detailed account of individual domestic reforms by economic sector, see the subsequent relevant chapters. For reference, a partial list of major management and institutional reforms in agriculture and industry follows.

Agriculture:

- The 1979 introduction of the household contract responsibility system gave control of land and herds to individuals under terms of "temporary" contracts; by 1983, over 90 percent of such assets had been transferred.
- The 1979-80 reform in rural prices raised significantly the procurement price of major agricultural commodities while leaving their urban retail prices largely unchanged and subsidizing the difference.
- In 1981-83 rural fairs for the sale of animals, output in excess of government obligations, tools, and handicrafts gradually emerged.
- In 1983 experiments were begun allowing peasants to sell vegetables and fruits freely in selected major urban areas, most notably Wuhan, resulting in dramatic increases in supply and quality.

- By 1984 "responsibility" contracts had been lengthened to 15 years or longer, with some made inheritable; the term "ownership system" rather than "responsibility system" became increasingly used informally.
- Also by 1984, most communes were disbanded, with rural political authority returned to counties and towns.
- In early 1985 rural commercial relations for some products were changed from the traditional system of mandatory procurement to one of individual voluntary contracts between farmers and state procurement departments.
- In spring of 1985 the introduction of major price reforms in urban retail vegetable, meat, and seafood markets, with income subsidies to compensate for cost-of-living rises, brought increased competition, improved food quality, and contributed to high inflation in politically sensitive urban economies, especially Peking's.
- In June 1985 a national grasslands law transferred virtual ownership rights over China's expansive grasslands to individual herdsmen in an attempt to apply private incentives to the restoration of overgrazed land and rationalization of herd management.
- By the winter of 1985-86, land in state farms, the last major agricultural units under central management, had been transferred either to individual household control or to collectively managed larger farms, essentially completing the decentralization of land ownership.
- In January 1986 grain prices were adjusted upward and quantities of grain contracted for sale to the state were reduced in some areas, allowing more grain to be bought at higher negotiated non-contract prices.

## Industry

- As early as 1979 the traditional Soviet emphasis on heavy, capital-intensive industry was formally replaced with a policy of industrial balance giving greater importance to light industry, which is in general more labor-intensive.
- In 1983, pilot enterprises began experimenting with operation on a for-profit basis, replacing direct transfer of all profits to the state with payment of an enterprise income tax.
- In 1983 textile price reforms for cotton and synthetic cloth demonstrated the effectiveness of prices for governing demand and resulted in the end of cotton cloth rationing.
- In 1983-84 the introduction of profit incentives in the coal industry as well as latitude to form joint ventures and sell new coal output at higher prices resulted in rapid increases in coal output, especially from small local mines.
- In early 1984 the "Contract Economic Responsibility System" was adopted everywhere for state-owned service enterprises, making them responsible for their own profits and losses.
- In May 1984, the State Council promulgated regulations further expanding the decision-making power of state-run enterprises.
- In September 1984, more than half of all industrial products were taken out of the plan, leaving decisions about output levels to enterprise managers.
- In October 1984, China's "Urban Reform Program" was presented, announcing far-reaching policies for severing relationships between enterprises and their ministries or local government supervisors. The program in principle stipulated a wide range of managerial freedoms and price reform measures, including the right to hire and fire labor, make investment

decisions, and set prices. It did not anticipate detailed specific measures these reforms would require.

- In May 1985, difficulties in transferring managerial authority to enterprises were reviewed, especially the interference of provincial and county officials; the independence of individual enterprise management was reaffirmed.
- In spring of 1985, experiments were begun with bankruptcy laws and procedures in selected Northeast provinces.
- In July 1985, new labor, wage, and bonus laws tied pay more closely to performance on the job.
- In September 1985, new state regulations allowed state enterprises and cooperatives to form "horizontal" joint ventures which cut across different trades, regions, cities, and different forms of enterprise ownership.
- January 1986 brought new shifts in prices of steel and cement, reflecting spontaneous free-market price changes during the inflationary months of 1985.
- By March 1986, negotiable stocks and bonds issued by state and cooperative enterprises emerged as new instruments for raising capital in competition with state-owned and regulated banks.
- Early 1986 saw the establishment of experimental financial hubs in selected major cities, with foreign exchange centers and interbranch borrowing by different state banks at negotiated interest rates.
- Official policy shifted with respect to regional development, promoting a "ripple" policy for three zones by which coastal provinces would develop fastest, transferring their technology and investment in waves to second line provinces and finally to the third set of provinces in the western interior; this undid longstanding Maoist priority on developing the interior.

These examples of agricultural and industrial reforms reflect the depth and complexity of the overall domestic reform movement, in particular the role of increased profit incentives and competitive choice. In many ways domestic reforms also provide the basic motivation for China's post-Mao expansion in international economic relations, which is seen as necessary to provide China with modern technology for all domestic economic sectors. The dynamism and rapid implementation of so many facets of this new policy of international integration, however, mark it as equal to the program of domestic reforms in its significance for China's economic growth and technical evolution.

China's new international economic posture represents a fundamental policy break not only with the Maoist past but also with a Chinese tradition of isolation and national self-sufficiency. Details of the most recent policy shifts, which have led to large deficits and significantly increased borrowing, are treated in some detail in Chapter 7. The few paragraphs which follow outline the long-term fundamentals of China's international economic strategy.

The economic dimensions of China's post-Mao international policies have two major goals: to acquire foreign technology, and to obtain critically necessary materials and equipments without which investment and production programs would be slowed unacceptably. Technology and critical inputs, then, are the core of China's foreign trade and payments strategy. Good examples of the technology transfer element are imports of plant, capacity, and know-how and overseas training of scientists and technicians. Examples of critical imports are high quality steel and industrial chemicals for synthetic materials.

The major difficulties related to acquiring technology and critical materials are China's shortage of foreign exchange and its poor ability to absorb new technology, given the low level and limited distribution of China's existing technology base. As a result, China's policies to reform the domestic economy have direct bearing on its ability to use foreign technology. The more Chinese enterprises make investment and production choices in a competitive environment based on profit considerations, the better use they will make of foreign technology. The rush to import technology in the late 1970s was halted when it was realized that the pre-reform system could not make good use of it. In 1984-85, with urban industrial reform well underway, new priority was given to technology imports.

With China's ability to absorb technology imports greatly improved, the remaining difficulty, limited foreign exchange, has received increased policy attention. Whereas early in the 1980s China's policy-makers were content to cut back imports to balance their foreign exchange budget, in the latter 1980s Chinese policy-makers seem reluctant to limit technology imports, preferring instead to maintain them by borrowing while policy attention is focused on promoting export earnings. China's most visible foreign economic policies, then, limiting unnecessary imports and promoting exports, are derivative policies with roots in the more fundamental goal of affording foreign technology and materials most critical for current development needs. Future policy can be expected to follow the current trend: screen imports and otherwise limit foreign exchange outflows while pushing exports on trading partners, both in general and as a condition for imports.

In both domestic and foreign dimensions, then, China's economic policies promote growth and increased economic efficiency by applying rather classic rules: promote competition in a profit-seeking environment and maximize technology improvements while using international trade to ease temporary bottlenecks in critical sectors. Although the overall program has some problems, they are not major ones threatening the reform process, and in general the outlook for the future is excellent. Evaluations of existing problems are presented briefly below.

## PROBLEMS

Although there are difficulties and complications related to China's economic reforms and current economic growth, none of them is serious enough to stop or seriously impede the overall process, unless some major unforeseen event such as a Taiwanese declaration of independence severely disrupts the reform consensus. Even in that case, it is unlikely that forces opposed to the current trends would have enough power to overcome the influence of the new program's many beneficiaries. In particular, even the death of Deng Xiaoping is now unlikely to weaken significantly a strong reform constituency.

The nature of the problems facing China's overall macroecononomic development can be placed in four categories: economic problems, such as the foreign exchange shortage; political problems, such as the opposition of mid-level bureaucrats; transitional problems, such as urban inflation; and, finally, the threat of major shocks, such as a move for Taiwanese independence or Deng's death. The seriousness of problems in each category is reviewed briefly below.

China's four most-often mentioned economic difficulties are energy, transport, technology, and foreign exchange.

Although China has rich energy reserves, they are poorly distributed geographically and in general inaccessible to major industrial centers. Electric power grids are underdeveloped, and in many coastal areas electricity is rationed, leaving productive capacity idle for as much as several days each week. When energy output fell in 1980-81, many analysts saw it as a sign of chronic output decline, but the output dip resulted from financial contractions, not technical or resource limitations, and a similar but less severe production dip in the winter of 1985-86 also had financial origins.

Although energy shortages remain a serious problem, during the reform period energy production has responded to incentive reforms, as have energy conservation measures. Economic growth rates have in the past been much in excess of primary energy growth, and there is no indication that energy will severely restrict rapid growth in the future.

Within the transportation sector, reforms and incentives have eased bottlenecks as well, with water and highway traffic growing rapidly to supplement slower and more expensive rail expansion. In general, however, transport of both freight and passengers is difficult and very few of China's regional sub-economies are linked, while within the sub-regions roads are poor and communities isolated. China's poor transportation network, in turn, limits the scope of commercial expansion under the reforms. Congestion of ports is a particularly serious problem.

China's low level of technical sophistication is often viewed as a major barrier to any rapid Chinese ascendancy in the international economic arena, and China's overall technology levels in virtually every sector, with the exception of showcase enterprises, are certainly very low. This low level of sophistication, in turn, makes the acquisition of new technology itself difficult, because there are so few supporting services and institutions. By itself, however, a low technical level enhances the prospects for rapid growth and modernization because of the many opportunities for improvement. This is all the more so given China's relatively literate and trainable work force. China's technical level will remain low by world standards for some time, but even small transfers of foreign methods have already had and will continue to have dramatic influence on product quality and capital productivity.

The foreign exchange shortage is in many ways more significant than either energy, transport, or technology problems because greater availability of foreign funds could ease the constraints in so many other dimensions. China's ability to earn foreign exchange, however, is limited, as falling world oil prices cut into revenues and as increased global protectionist sentiment restricts new markets for textiles and other low-technology manufactures. Foreign exchange earnings can be supplemented to a limited degree by foreign borrowing, but even so, the inability to acquire needed technology and scarce inputs will unquestionably slow China's overall economic progress.

It should be stressed, however, that although all of these economic problems are slowing growth somewhat, neither individually nor as a group are they severe enough to stop growth or threaten the reforms. Similarly, important political problems associated with the reforms, in particular corruption and mid-level bureaucratic dissatisfaction, present significant challenges to the current modernization program but are unlikely to stop or undo it.

If any powerful group in China is both in a position to resist reform progress and has an incentive to do so, it is the large body of state bureaucrats--ministerial employees who for decades have managed the central economic planning apparatus. Because they are in a position to facilitate many of the intermediate reform steps (for example, by encouraging enterprises under their review to form horizontal links with other enterprises), these bureaucrats are also in a position to slow the reforms by withholding or drawing out required formal procedures. In many ways they are acting in their own self interest, because if the various horizontal commercial links between enterprises replace vertical allocation and procurement under the plan, these bureaucrats, millions of them, will be literally out of jobs.

The power of these groups comes in part from the traditional and often personal relationships of control they have with specific enterprises and the uncertainty on the part of those enterprises about how far the reforms will be championed by higher authorities. In this sense, then, one interpretation of the situation describes it as a conflict between the mid-level bureaucrats on the one hand and the enterprise managers and top national leadership on the other. It is in one sense the middle against the top and the bottom. With the national reform leadership in such commanding authority, in spite of ever-persistent rumors about a conservative back-lash, the competition for managerial control is apparently slowly being won by the top and the bottom. An additional factor in favor of this trend is the shift of mid-level bureaucrats themselves into new and more stable positions in the expanding decentralized economy. Evidence of the extent of this shift, however, is limited, and the resistance to reforms by the middle remains a major consideration.

Unlike the resistance of mid-level bureaucrats, the problem of official corruption is difficult to conceptualize. In one sense, black markets and pay-offs are the first signs of market relationships which eventually become established and beneficial. In another sense, however, the official bribes, protection schemes, extortion, police banditry and other forms of institutionalized theft found in so many poor countries could have a crippling effect on China's growth if they are allowed to develop and entrench themselves. There is little sign that what is currently reported as corruption in China has reached anything near these proportions. Accounts, however, of crackdowns on local highway tolls and arbitrary official charges on enterprises for permission to do business or transport products, merely as revenue-raising mechanisms, harks back to conditions in China before 1949 when the lack of a viable central authority meant that local warlords and toughs made honest commerce difficult if not impossible.

There is, then, this ultimate threat of corruption in China, but a strong central authority does exist, and "corruption" in the form of favors for children of high officials or diversions of major import shipments to alternative destinations for hard-currency bribes, will not stop the current reform progress. Furthermore, neither the party membership nor the population at large is likely to believe charges that these phenomena are alien to China and the result of contact with the West.

A third major set of problems in China, transitional instabilities, are the result of the reforms themselves, as their implementation goes in fits and starts, with bursts of growth, contraction of investments, import surges, inflation, subsidy cut-offs, and visible income discrepancies. Although transitional, these instabilities could nevertheless disrupt the popularity of the reform movement and weaken its legitimacy even in the eyes of current reform coalition members.

Among the various forms of transitional instability, two stand out: inflation and unemployment. Each threatens citizens' livelihoods, especially urban livelihoods. Inflation erodes real income, and unemployment cuts off income and benefits. Cities are the major potential source of instability in the current reform phase. Urban populations are easily mobilized and highly visible, and isolated outbursts in Peking and other cities have shown that China is capable of riots as spontaneous and potentially severe as those in other poor countries where government reforms have led to price rises for staple foods or budget cuts which also cut jobs.

However, just as the reforms bring on these transitional instabilities, they also seem to cushion their impact and provide long-term corrections. Reforms have given rise to new macroeconomic policies for controlling inflation, such as interest rate adjustments, credit controls, and taxation. Reforms have strengthened the supply response to shortages causing inflation; vegetables and coal are two visible examples of products in which the reform movement brought higher prices initially, which in turn prompted an increase in supply and downward price adjustments. For unemployment the pattern is similar and is most visible in the rural economy. As rural reforms have abolished communes and distributed land, some of the workers not needed for farming have found jobs with simultaneously emerging rural industries and service trades. Urban commercial and other service jobs are also growing in number, but since many of them are outside the state economic structure, information on their significance is limited.

The major point is that although the reforms are causing instabilities, they are also helping to ease them, and as long as China's leadership encourages adjustments in this way, the instabilities are unlikely to threaten the reform process itself. The question of leadership, then, raises the fourth category of problems facing China, the potential for major domestic and international shocks which could disturb the new development strategy. Two examples would be the death of Deng Xiaoping and a Taiwan declaration of independence from the mainland.

It is difficult to gauge how important Deng Xiaoping is to the continued success of the reforms. His personal influence and prestige seem to reach all levels of the current administration. In the competition between mid-level bureaucrats and local enterprise management, continued strong support from the very highest levels of the central government is critical. But as time passes, the period when Deng's personal presence is necessary may be coming to a close, if it is indeed not already over. The current reforms are not the creation of Deng Xiaoping alone and are as much a result of the nationwide fatigue and disillusionment associated with the Maoist period as they are the result of political engineering by any clever leadership clique. As a result, the death of Deng Xiaoping at this late stage in the reforms is unlikely to stop, much less reverse, the reforms.

Unlike the death of Deng, any movement among indigenous Taiwanese to form an independent country following the death of Jiang Jingguo could have major repercussions on China's domestic and international political equilibrium, with significance for the economy and its reforms. In particular, the response of Japan, the United States, Europe and other major world power centers would either reinforce or weaken the consensus currently building in China that domestic reforms and growing international integration are in China's best interests.

## PROSPECTS

On balance, considering the rapid growth in recent years, adjustments made to curb inflation in 1985, recovered strong economic growth in 1986, the continuation of existing reforms and new experiments with incentives and competition, China's economic prospects are excellent.

The economic projections in Tables 2-1 through 2-10 provide a realistic picture of the scale and pace of China's economic expansion through the end of the century. In comparison with these Rock Creek Research projections, the official Chinese targets and their more detailed World Bank counterparts provide a low estimation of what current growth trends and reform policies imply. This is in part because the official targets are also political slogans providing "safe" growth goals in round integer form ("quadrupling" gross output, "doubling" gross energy output).

Low official and World Bank estimates result also from the limited information available when they were made. The "quadrupling" targets were announced in the early 1980s when the success of rural reforms was still in doubt and before the rapid industrial growth under urban reforms in 1984-85. The same is true of World Bank projections, which are based on 1983 data and which, in any event, were constrained to match official Chinese growth slogans. Events have since out-paced these earlier low estimates, and if China were to reach only those earlier goals, output growth would have to slow dramatically in the coming few years. This is not likely.

If China does grow in something like the pattern outlined, it will have a GDP in 2000 roughly the size of Japan's today. On a per-capita basis, of course, China's level will be roughly one-tenth that of Japan's now, and because of China's size, international trade will not be as important a factor in its overall economy. Nevertheless, China's economy will be large enough to affect the economies of virtually all other countries and territories in the region, if not the rest of the world.

Given the relatively slow growth in much of the world's economy, a sustained economic expansion by China, fueled in part by an emerging peasant middle class of tiller-owners, could support economic activity in many neighboring economies. China's economic development will not be perfectly balanced; there will be unmatched demand in some sectors, extra production in others. Natural opportunities for trade and investment will grow as China's economy grows. Where ten years ago there was virtually nothing in terms of international trade and economic opportunity, in fifteen years there will be a major world economy. Many observers of current Chinese trends resist thinking in these terms, but the economic trends to date and their qualified projection into the future show that events may be moving faster than even projections in this chapter indicate.

## CHAPTER THREE -- Industry

### EXECUTIVE SUMMARY

**TRENDS**

* A major slowdown in industrial growth in late 1985 has been followed by a recovery at the end of first quarter 1986.
* Shifts in enterprise management, from state to collective and individual, are a sign of continued reform and the major impetus for recent rapid growth.
* The predominance of coastal industry continues.

**POLICY**

* State policy attempts to control inflation led to the 1985 slowdown.
* Reforms in enterprise management continue as market forces play a larger role in economic decision-making by managers.
* Price reform continues, although more gradually in 1986 than in 1985.
* Coastal industrial bases have been given priority in China's overall development program.

**PROBLEMS**

* Enterprise management is still constrained by administrative controls which inhibit decisions aimed at improving plant efficiency and profitability.
* Mid-level bureaucrats have been reluctant to support the reform program, because it decreases their political power.

**PROSPECTS**

* Double-digit growth is likely to continue in 1986.
* It is possible that China will embark on a large-scale program of divestiture of state and collective enterprises to individual lease-holdings.

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### TRENDS

China's 1985-86 industrial output trends, structural shifts, and regional patterns show the overall rapid change affecting the sector. In particular, although annual data report startlingly high real growth, monthly data show that there was a major slowdown and even industrial decline in late 1985, as state policies attempted to dampen inflation. On the other hand, official monthly growth calculations, by the nature of their measurement, are slow to report major shifts in industrial output trends, and in particular by spring of 1986 had not yet shown the strong industrial output recovery revealed by more accurate seasonally adjusted data.

The sustained strong industrial output record is accompanied by continuing shifts in ownership of industrial enterprises, from state to cooperative and individual control. At the same time, regional output patterns show that growth is increasingly favoring the coastal provinces, where there is already a preponderance of China's industrial activity. In sum, the urban industrial management reforms appear to be ongoing and successful in sustaining high growth, in spite of government efforts to use macroeconomic controls to discourage the accompanying inflation.

China's industrial sector has undergone well-documented rapid growth in the early 1980s. Gross output of industry, corrected for inflation, grew over 16 percent in 1984 and over 21 percent in 1985, if output of rural village industry is included in the total. As discussed below, these annual statistics hide the fact that industrial output, seasonally corrected, actually declined throughout much of the second half of 1985, but growth in the first half was so high, and the recovery in early 1986 so strong, that the annual record is still an accurate picture of China's overall industrial trends during the period.

Table 3-1
INDUSTRIAL GROSS OUTPUT, 1975-85
(constant 1980 prices)

| Year | Heavy Industry | Light Industry | Rural Industry | Total With Rural | Total Without Rural |
|---|---|---|---|---|---|
| (Percent Growth) | | | | | |
| 1975 | 16.83 | 12.98 | 32.80 | 15.53 | 15.13 |
| 1976 | .55 | 2.37 | 44.79 | 2.46 | 1.34 |
| 1977 | 14.27 | 14.31 | 23.24 | 14.61 | 14.29 |
| 1978 | 15.59 | 10.80 | 15.40 | 13.57 | 13.49 |
| 1979 | 7.67 | 9.64 | 16.40 | 8.82 | 8.51 |
| **1980** | **1.46** | **18.38** | **21.31** | **9.29** | **8.76** |
| 1981 | -4.72 | 14.12 | 12.20 | 4.51 | 4.13 |
| 1982 | 9.82 | 5.71 | 9.68 | 7.81 | 7.71 |
| 1983 | 12.38 | 8.70 | 23.47 | 11.20 | 10.53 |
| 1984 | 14.20 | 13.90 | 53.41 | 16.31 | 14.05 |
| **1985** | **17.90** | **18.10** | **61.58** | **21.40** | **18.00** |
| | | | (Billion 1980 Yuan) | | |
| 1985 | 418.1 | 411.5 | 93.1 | 923.4 | 829.5 |

SOURCES: Official Chinese statistics and RCR calculations. (J5cbc04.d5j)

The annual growth rates for Chinese industry, given in Table 3-1, above, show that double-digit growth is not unusual. In particular, since 1975, overall industrial growth has hovered around 10 percent. Except for only two periods of particular crisis, Mao's death in 1976 and the 1981 state fiscal crisis from the fighting with Vietnam, high growth has been the norm for China. The double-digit industrial growth of 1984-85 seems to match growth in the 1977-78 period, which, however, without management and market reforms, could not be sustained.

Indeed, the most important reason for such high industrial growth in recent years is the on-going series of reforms in industrial management and market relationships, including a pronounced shift in growth and ownership from state to collective enterprises. There are numerous other causes for the impressive record, including rapid increases in investment, money supply, agricultural output, and a relaxation, for the time being, of energy constraints which seemed so critical in 1980-81. But in the final analysis, reforms introducing profit incentives and an increasing degree of competitive choice have been the principal factor.

Because trends in China's industrial output are shifting faster than annual data can accurately report, Tables 3-2 and 3-3, below, give quarterly and monthly output statistics and show both the industrial slump in late 1985 and the recovery in 1986. Notice in particular how the official growth calculations, in the quarterly data and in the second column of monthly data, report the trends with a delay of roughly three months.

Table 3-2, below, shows the pattern of quarterly industrial output as measured by official calculations. The surge in output in late 1984 and early 1985, as well as the slowdown in winter of 1985-86, is clear. The recovery in early 1986 will not appear in official data until later in the year. One of the most interesting aspects of the recent industrial boom, slowdown, and recovery is the way both heavy and light industry have grown in similar patterns. Earlier in the decade, first heavy industry and then a year later light industry experienced strong growth slumps, and if anything, output for the two major categories see-sawed. In recent years, Chinese policy-makers have apparently achieved one of their goals: balanced growth for heavy and light industry.

Table 3-2
GROWTH OF QUARTERLY GROSS OUTPUT 1982-1985

| Year/Qtr | | Total Industry | Heavy Industry | Light Industry |
|---|---|---|---|---|
| | (Percent Growth) | | | |
| **1982** | **I** | **11.6** | **8.5** | **14.6** |
| | II | 8.8 | 10.5 | 7.3 |
| | III | 5.7 | 10.3 | 1.2 |
| | IV | 3.1 | 5.0 | 1.4 |
| **1983** | **I** | **6.9** | **12.0** | **2.3** |
| | II | 10.3 | 12.7 | 7.9 |
| | III | 12.7 | 13.6 | 11.8 |
| | IV | 12.2 | 14.8 | 9.8 |
| **1984** | **I** | **11.9** | **11.7** | **12.2** |
| | II | 11.4 | 11.8 | 10.9 |
| | III | 14.4 | 15.6 | 13.1 |
| | IV | 17.5 | 17.2 | 17.7 |
| **1985** | **I** | **23.0** | **20.6** | **25.4** |
| | II | 23.4 | 21.5 | 25.4 |
| | III | 17.3 | 14.5 | 20.3 |
| | IV | 10.2 | 10.7 | 9.7 |
| **1986** | **I** | **4.4** | **5.2** | **3.6** |
| (Billion 1980 Yuan) | | | | |
| 1986 | I | 198.72 | 98.50 | 100.22 |

SOURCES: China's State Statistical Bureau official data.

Just as important as trends revealed by official quarterly and monthly growth calculations is the realization that official data report trends after they have already occurred. Trends shown by the official monthly data "lag" the major shifts. This delay results from the nature of the official measure, which compares output in one month with output in the same month one year earlier. In other words, the growth rate reported for one month includes the increases in output for all of the previous 12 months. Even if growth is strong for several months, the official growth rate would continue to show low growth and even negative growth, if during the previous 6 months output had sharply declined. This is particularly true if one year earlier the economy was also changing rapidly, as it was in early 1985. To put it yet another way, it takes many months of strong decline or strong acceleration before the actual force of the change is reflected in official statistics.

Table 3-3
MONTHLY GROWTH OF TOTAL INDUSTRY
(Official and Seasonally Adjusted)

| Year | Mon | Total Gross Output (Bil Yuan*) | Official Growth Rate* (%) | Seasonally Adjusted Growth Rate* (%) |
|---|---|---|---|---|
| 1984 | Jan | 51.9 | 8.5 | 17.1 |
| | Feb | 46.1 | 16.0 | 3.4 |
| | Mar | 56.9 | 12.0 | 24.8 |
| | Apr | 57.1 | 11.1 | 16.4 |
| | May | 59.0 | 12.0 | 21.7 |
| | **Jun** | **60.5** | **11.0** | **11.4** |
| | Jul | 56.5 | 14.2 | 23.9 |
| | Aug | 57.6 | 14.6 | 25.1 |
| | Sep | 61.4 | 14.4 | 25.8 |
| | Oct | 61.4 | 15.1 | 17.4 |
| | Nov | 64.7 | 16.8 | 20.5 |
| | **Dec** | **65.5** | **20.5** | **10.5** |
| 1985 | Jan | 64.6 | 24.5 | 63.6 |
| | Feb | 56.2 | 22.0 | 35.8 |
| | Mar | 69.6 | 22.3 | 16.6 |
| | Apr | 71.2 | 24.8 | 19.3 |
| | May | 72.3 | 22.6 | 11.0 |
| | **Jun** | **74.3** | **22.9** | **9.4** |
| | Jul | 67.9 | 20.2 | 6.5 |
| | Aug | 67.6 | 17.4 | .4 |
| | Sep | 70.3 | 14.5 | -6.6 |
| | Oct | 68.6 | 11.7 | -12.4 |
| | Nov | 70.3 | 8.8 | -28.4 |
| | **Dec** | **72.2** | **10.2** | **9.7** |
| 1986 | Jan | 68.2 | 5.6 | 36.5 |
| | Feb | 56.8 | .9 | -2.8 |
| | Mar | 73.8 | 6.0 | 19.1 |
| | Apr | 74.0 | 3.9 | 16.5 |
| | May | 76.0 | 5.0 | 20.0 |

* NOTE: Output in constant 1980 yuan; growth rates on an annual basis.

SOURCES: Monthly data from **China Economic News**, various issues, and State Statistical Bureau, **Monthly Statistical Bulletin**, Peking, various issues. Seasonally adjusted growth rates are Rock Creek Research calculations. (di001s.b6f)

To avoid the delay in reporting growth shifts, seasonally adjusted data are used in Table 3-3, above. For this, a month's output is compared to that for more recent months, after correcting for its unique seasonal characteristics, based on their average over many years. The most striking trend in the seasonally adjusted data is the recovery in output growth in December-May, excluding the irregularity in February. On average, output in the first five months of 1986 grew nearly 18 percent on an annual basis. These monthly growth rates are the strongest since the 1984-85 boom period, and if they continue would mean overall 1986 industrial growth of more than 10 percent.

The same data show negative industrial growth in late 1985 (September-November), the major reason for low official growth rates in early 1986. Looking even earlier, in mid-1984 the seasonally corrected series also shows the sustained growth pattern which eventually appeared in official data in early 1985. These are the clearest illustrations of the lag in official reporting and indicate that the recovery revealed by adjusted data for the first quarter will also become officially evident in the third quarter of 1986, at the latest.

Table 3-4
GROWTH IN MONTHLY ENERGY OUTPUT 1985-1986

| Month | | Coal | Crude Oil | Natural Gas | All Electricity | Hydro-Power |
|---|---|---|---|---|---|---|
| Growth Rates (Percent) | | | | | | |
| 1985 | Jan | 16.6 | 9.4 | 5.8 | 10.4 | 7.3 |
| | Feb | 10.3 | 9.0 | 6.1 | 4.6 | -2.8 |
| | Mar | 6.0 | 12.3 | 6.0 | 7.6 | 2.5 |
| | Apr | 11.6 | 12.5 | 13.9 | 9.9 | 14.1 |
| | May | 11.0 | 9.9 | 6.0 | 8.5 | 2.7 |
| | Jun | 18.7 | 11.1 | 7.8 | 9.2 | 6.8 |
| | Jul | 11.9 | 10.6 | 5.7 | 8.3 | -5.8 |
| | Aug | 9.2 | 7.6 | 5.5 | 7.1 | 5.3 |
| | Sep | 10.0 | 6.8 | 6.4 | 8.0 | 7.4 |
| | Oct | 9.0 | 6.6 | -2.3 | 8.4 | 3.5 |
| | Nov | 5.6 | 6.2 | 7.7 | 8.9 | 14.2 |
| | Dec | 9.3 | 5.9 | -9.8 | 10.4 | 9.6 |
| 1986 | Jan | -3.3 | 3.9 | .5 | 6.0 | -3.7 |
| | Feb | -3.7 | 1.4 | 8.9 | 6.4 | -7.8 |
| | Mar | 7.1 | .6 | 7.8 | 9.3 | -1.2 |
| | Apr | -1.6 | -2.0 | -5.0 | -2.4 | 20.7 |
| | May | 6.0 | 4.6 | 6.6 | 5.4 | 26.3 |
| Output * | | | | | | |
| | May | 75.83 | 10.84 | 1.20 | 37.57 | 8.6 |

* Reported as follows: Coal and Oil in million tons, Natural Gas in billion cubic meters, Electricity in billion kWh.

SOURCES: State Statistical Bureau **Monthly Bulletin of Statistics**, China (in Chinese), electricity from **China Economic News**, various issues. March 1986 through May 1986 data from **China Economic News**, various issues. (j6bci01t.d6f dmthengy.d6e)

The slowdown in energy output, especially coal, as measured by official monthly growth rates, appears particularly strong and reflects both low if not negative growth late in 1985 and rapid output growth in early 1985, one year earlier. Negative official growth rates for coal, shown in Table 3-4, above, mean that output in the first quarter was actually less than it had been at the peak of the 1984-85 industrial boom. Because of a shortage of historical monthly data for energy, seasonal corrections have not been made. It is important to note, however, that just as in the energy output slowdown in 1980-81, the causes lie not in some technical or underlying structural failing of the energy industry. Rather, the poor performance is the result of financial policies implemented by the central government to limit inflation by cutting subsidies and investment. Recovery in output growth should accompany either renewal of state disbursements or reform of coal prices allowing significant industry profits.

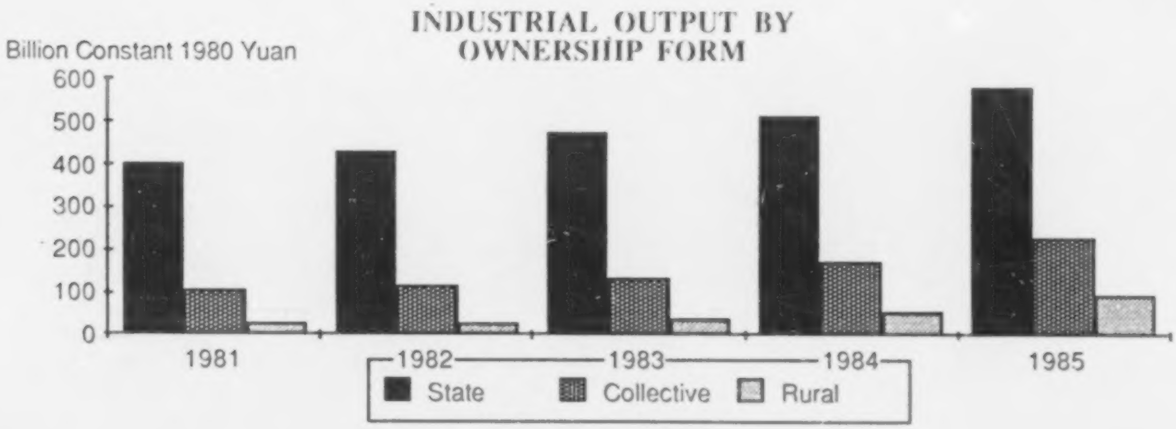
Table 3-5
INDUSTRIAL OUTPUT BY FORM OF OWNERSHIP, 1980-85

| | State Owned | Collectively Owned | Village Industry* | Other Forms | Total With Village Industry* |
|---|---|---|---|---|---|
| (Percent Growth) | | | | | |
| 1980 | 5.6 | 18.8 | 25.1 | - | 11.0 |
| 1981 | 2.5 | 9.4 | 12.2 | 11.5 | 4.6 |
| 1982 | 7.1 | 9.5 | 9.7 | 27.7 | 7.8 |
| 1983 | 9.4 | 13.5 | 23.3 | 33.9 | 11.2 |
| 1984 | 8.9 | 29.8 | 53.4 | 56.8 | 16.3 |
| **1985** | **12.9** | **30.9** | **61.6** | **39.5** | **21.4** |
| (Bil 1980 Yuan) | | | | | |
| 1985 | 584 | 230 | 94 | 12 | 923 |

* NOTE: Village Industry is currently being redefined as part of Industry proper.
SOURCES: Official statistics and RCR calculations. See Statistical Appendix.

A different production shift, from state- to collectively-owned enterprises, is documented in Table 3-5. The shift comes as a result of the formal transfer of approximately three thousand enterprises from state to collective ownership in 1984 and the implementation of urban management reforms. Table 3-5 shows that cooperative industrial enterprises have experienced more than twice the growth of state-owned plants and account for more than a quarter of all gross industrial output. The rapid growth of cooperative industry, which continued to out-pace state industrial growth during the late-1985 decline, attests to the on-going reforms to decentralize management.

Diagram 3-1



The rapid growth of the third industrial ownership category, village industry, requires qualification, however. Newly released data show that of reported gross output value of village industry, only roughly 5 percent is value added. That is, much of village industrial output appears to be the performance of relatively minor operations to industrial products in production. But because of the Soviet output measure used, total value of the product is counted as output. As a result, the degree of double counting and hence spurious output growth reported is very high for village industry. The five percent value-added share out of gross output for village industry must be compared with roughly 33 percent for industry in general.

In spite of these qualifications for village industry, which is growing so rapidly, the overall pattern of industrial output through 1985 and into 1986 reveals ongoing reform and adjustment in China's industrial ownership pattern. In particular, collectively-owned industry seems to be at the forefront of enterprise management experiments with enterprise leasing, bankruptcy laws, and worker-owned company equity shares.

A final category of significance for China's industrial growth is shown by investigations of provincial and regional industrial growth patterns. In general, provincial industrial data for the second half of 1985 confirm earlier trends which showed the coastal provinces to be both much more heavily industrialized and growing more rapidly than interior provinces. The same data show that the economy-wide industrial slowdown in the second half occurred relatively evenly in all regions, although the interior fared somewhat more poorly while the South Coastal provinces grew most rapidly both before and during the slowdown. Not only are coastal provinces more industrialized overall, for certain sectors the imbalance is even more striking, such as for machinery, chemicals and other heavy industrial sectors.

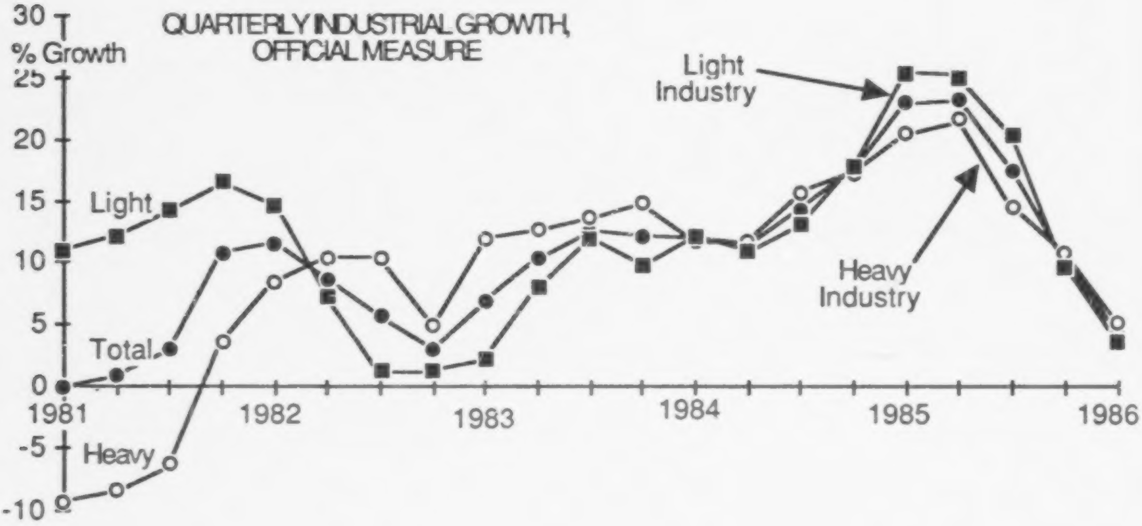
In sum, China's industry has experienced very rapid growth, been subjected to a state-sponsored slowdown to control inflation, has recovered in the first half of 1986, and has shown the industrial reforms to be effective in strengthening output by collective enterprises in particular. Although the period of growth correction apparent in late 1985 appears to be over, the nature of the 1986 recovery is not yet clear.

## POLICY

China's industrial policy is a combination of reforms in enterprise management, correction of state price imbalances, investment emphasis on energy and chemicals, and both credit and state investment controls to limit the inflationary impact of the overall reform program. The overall strategy is intended to increase product quality and have output better match the needs of consumers, including the export market. Many of the policies are transitional, as China shifts its industrial management system from one relying heavily on ministerial control and allocation to one based on enterprise management initiatives with the freedom to make numerous management decisions without consulting with central authorities. In this sense, the 1986 reforms are the continuation of a longer process of experimentation and adjustment which is still in a stage of considerable flux.

By far the single most salient industrial policy shift in 1985-86 was the decision to combine state investment cutbacks and controls on credit to contract output in the second half of 1985. The reason for the contraction was the need to control inflation, which by the of middle 1985 had reached 30 percent in some markets. These steps represent a major experimentation with the manipulation of macroeconomic variables to achieve policy goals. In part the more indirect measures have been made necessary by the success of the enterprise reforms. Quarterly and monthly data on investment and money supply show that the contractionary steps came in the August-November period of 1985, and tnat by the first quarter stimulative policies, especially those expanding the money supply, were in full force.

Diagram 3-2



As successful as these control policies seem to have been in the winter of 1985-86, they introduced the worry that policies to control inflation might also slow the industrial management reform program, which had been responsible for so much of tne industrial growth. This does not seem to have happened, and the over-arching policy of fundamental urban industrial reform, in many dimensions, continues to dominate China's industrial development strategy.

Urban reforms, primarily intending to decentralize industrial control, were formally announced in October of 1984, but they began much earlier in the decade in a series of experiments and partial reforms which continued to broaden their scope. The first phase of industrial reforms covered three areas. First, they called for taxes to continue to take the place of profit delivery. (For details on tax reform, see Chapter 6, Banking and Finance.) Second, factory managers were given greater responsibility for plan and managerial decisions. Third, departments were streamlined to give more power to enterprises over production, sales, prices, use of funds, personnel affairs and joint ventures. The number of mandatory plan targets under the State Planning Commission has been reduced from 365 to 65.

By May of 1985, 10,000 enterprises nationwide were experimenting with the transfer to factory directors of full responsibility for their enterprises' wages, production and finances. The program had achieved some success, although it was not without political problems. It benefited the system of workers' congresses since the directors needed the backing of the workers. But problems were cited, such as clarifying the relationships between factory directors party committees and workers, and directors who abused their powers for their personal gain. Nonetheless, although it was still considered an experiment, regions and departments were encouraged to select more enterprises to expand the program.

As of June at least one province, Jiangxi, was promoting a responsibility system in large and medium businesses with the plant director, entrusted by the state, controlling the plant's production and operation. Under this system, the party secretary in the plant is subordinate to the director. At the same time, the province emphasized the need to relax control and insure that enterprises make clear a legal separation from local governments. Obligations to other departments and expenses other than paying taxes were strictly banned.

The reform process continued with wage reforms in the summer of 1985, under which the state adopted regulations tying wages to economic performance, to provide workers with incentives similar to those already in place in rural areas. The state economic commission announced plans to link wages and bonuses to taxes and profits. However, the tax on wages in state owned industries is sharply progressive, designed to discourage excessive bonuses and wage increases. The tax rate is zero for any increase in wages less than 7 percent over 1984's and thereafter increases rapidly to 100 percent for raises of between 12 and 20 percent. A 300 percent tax is levied on wage hikes over 20 percent.

In late summer two steps were taken to counter additional ongoing problems in industry: the high number of firms with consistent economic losses, and the decline in the quality of industrial output. First, a bankruptcy process for struggling enterprises was introduced. Formerly, they would have been merged with profitable enterprises. The new regulations allow the proper authorities from banking, tax, insurance and auditing departments as well as creditors to dispose of the frozen assets of a bankrupt firm and establish a fund to provide relief for workers laid off due to bankruptcy. Then, in September, the State Economic Commission announced plans to oversee about 100 quality inspection centers and quality-test stations to run quality checks on up to 200 major industrial products every three months. However, the fundamental approach to product quality is to rely on technological progress with the underlying assumption that current quality problems will work themselves out naturally as technology improves.

The policy and plans for 1986 have emphasized consolidation efforts such as improving the factory director management, decreasing corruption and increasing product quality. The Seventh Five Year Plan (1986-90) calls for 70 to 90 percent of Chinese industrial products to adapt international standards for their products. To implement this policy, managers will be held responsible and those who achieve these standards will be offered preferential treatment for energy supplies, transportation, taxes, loans and foreign currency. Also, greater price ranges will be used to reflect quality gradations.

But in several important dimensions, 1986 industrial policy involves far more than consolidation of past changes. Price reforms have continued in the first half of the year, most noticeably for prices of cement and steel, raising the prices of scarce products and lowering those for lower quality output. Even more dramatic are the advance stages of management reforms reported for the city of Shenyang, where over 100 enterprises have been leased outright to managers, where all cooperative industrial enterprises have reportedly been required to sign strict bankruptcy regulations, and where enterprise employees have purchased ownership shares in their plants on a large scale. Although direct statistical evidence on the success of management reforms is difficult to obtain, anecdotal evidence strongly supports the conclusion that industrial policies in 1986 are continuing the ambitious changes begun in 1983-85 and carrying them into new areas.

A final policy shift reflects a major break with regional strategies of China's Maoist past. In the first half of 1986 official sources announced and described the "ripple" policy by which industrial growth in coastal regions would receive priority, allowing the benefits to "ripple" first to the belt of provinces just away from the coast and subsequently to provinces deep in China's western interior. In other words, the new regional policy formally does away with strategies to place emphasis on industrial development of the interior in favor of a three-zone strategy: coastal, near-coastal, and interior, with the coastal zone clearly receiving priority.

## PROBLEMS

The problems facing China's industry are both economic and political. Most fundamentally, enterprise management is still constrained by administrative controls which inhibit decisions aimed at improving plant efficiency and profitability. Closely related is the problem of China's industrial price system, which because of its poor reflection of scarcity or consumer demand, provides unreliable signals for investment decisions and hence is one reason why greater independence for enterprise managers has come so slowly. Ironically, the only long-term solution to China's price system could be management reform itself, to provide the incentives to set and demand prices more closely reflecting market conditions.

The political problems are focused most directly on the struggle between mid-level bureaucrats on the one hand and the enterprise managers and reform-minded national leadership on the other. Additional problems come from provincial, county, and township officials who want to replace ministerial control of enterprises with regional control and, hence, are in conflict with enterprise managers and national leadership. Although these problems are important, they are difficult to analyze within an economic framework. It is nevertheless possible to say that the critical factor is the continued dominance of national policy by leaders dedicated to continuing the management reforms. In many ways, the degree of publicity being given to these problems in the Chinese press is also one measure of the seriousness of the effort to overcome them.

Among the more economic and technical problems, the most noticeable are: poor quality of materials and labor, shortages of energy, raw materials, and skilled technicians, poor judgement in investment decisions, continued losses requiring subsidies, uncertain tax burdens, inflation, and policy-induced macro-economic instabilities. Many of these traditional problems have been exacerbated by the rapid 1984-85 industrial growth.

Low quality products, frequently counterfeits of famous Shanghai brand consumer goods, are increasingly reported. The State Economic Commission reported in 1985 that there has been a marked trend towards product deterioration since the very high growth period began. The goods cited have ranged from automobiles, bicycles and wristwatches to cigarettes, food and medicine.

Some sectors are still following incorrect price signals, leading to excessive, unbalanced, or inadequate growth. Recurrent shake-outs in various industries are anticipated, as investment misjudges market potential. A shortage of cotton yarn in Shanghai, a major textile center, illustrates the skewed growth produced by poor price signals. The textile ministry reports that the shortage resulted from rapid increases in post-processing capacity while capacity for the less profitable cotton yarn production remained constant. In addition, more of the cotton produced was being sold to village and township enterprises at higher prices than the Ministry's state enterprises. Although price adjustments would be the "natural" solution to the problem in a market economy context, these have continued to face stiff resistance from state enterprises accustomed to preferential treatment. Instead, to deal with shortages, preferential tax treatment will be offered to enterprises producing less profitable products, and the distribution of profits will be readjusted to encourage cotton yarn production.

Losses by state-run enterprises continue to be a burden on state finances, despite reforms calling for independent accounting and enterprise responsibility for profits and losses. The national budget for 1985 anticipated that losses incurred by state industrial enterprises this year would be 20 percent lower than in 1984. However, preliminary state budget data for 1985 show that total subsidies have increased substantially. (For details, refer to Chapter 6 on Banking and Finance.)

Crucial industrial goods are still subject to state plans, for which enterprises sign contracts with the state. After they have fulfilled contracts with the state, enterprises can sell their remaining goods in the "free" market or at negotiated prices. However, since the state prices are lower than market ones, contract fulfillment has been low. In one example cited, the Anshan Iron and Steel Company had supplied only 23 percent of their contracted pig iron to the state in the first half of 1985.

Tax burdens on enterprises are heavy, especially for the large state enterprises which are supposed to be the key to urban reforms. According to Xinhua surveys in 1985, roughly 80 to 90 percent of their profits were delivered to the state. Collective enterprises in cities and towns delivered roughly 50 percent, while village industries delivered only 30 percent. In Changsha, a city in Hunan province, town-run enterprises provided 56.5 percent of county revenues in 1984, despite provincial regulations stating profit delivery should be less than 30 percent. Enterprises have been asked to pay up to 30 kinds of charges. Enterprises under the coal departments received the most random charges and had their prices forced down by local officials, despite the production and marketing problems faced by the coal industry.

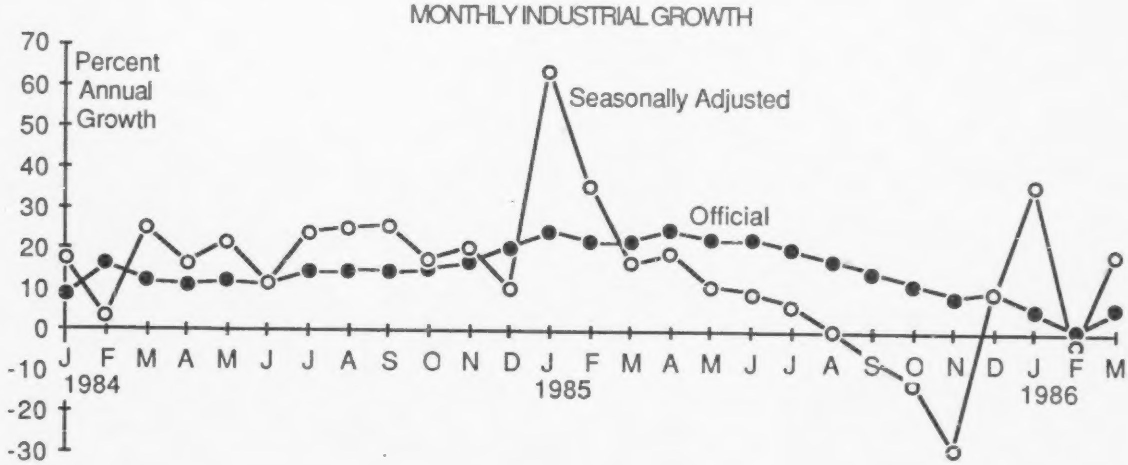
In addition to these various micro-economic problems, there is also the emerging problem of macro-economic instability. China appears to be entering a period of cyclical high growth and sudden slowdown periods. Interestingly, the problem of instability is made worse by the official monthly measures of industrial growth which report shifts in output growth only with a delay, thereby also delaying needed policy shifts. For example, stimulative policies were continued into early 1985 because it was not clear that they had already worked in the Fall of 1984. Similarly, in the Fall of 1985, policies in October and November continued to dampen credit and investment activity, when seasonally adjusted data showed the contractionary steps taken in the summer had already worked. The continuation of contractionary policies when restimulation was appropriate exacerbated the late 1985 decline. It is too early to tell if the 1986 industrial recovery will in turn lead to another inflationary boom period.

The problems facing China's industrial development, then, are many and complex. In general, however, most of them appear to respond to the numerous steps generated by the overall reform movement. As a result, perhaps the most fundamental problem would be a weakening of the reform process and the commitment to it by China's leadership. At present this problem does not appear to be a serious one, but it is the area deserving the most careful monitoring.

## PROSPECTS

By far the most intriguing but as yet highly uncertain prospect for China's industry is that of large-scale divestiture of state and collective enterprises to individual lease-holdings. With the current leadership and the enterprise management goals of the new five year plan, this evolution in the control of industry into essentially private hands is the most likely mechanism for achieving the enterprise independence which now appears to be at the heart of China's industrial policy. But such a trend, if it comes, will come relatively gradually, and in the meantime, attention will focus on industrial growth achievements under the more transitional conditions already apparent in 1985-86. The shifts in value and ownership of industrial output from state to collective and other forms which are so evident in Table 3-5 are expected to continue.

Diagram 3-3



In the short-term, China's 1986 industrial recovery from the mild recession in late 1985 should bring 10-12 percent growth for 1986 overall, but given the speed with which the economy responds to government shifts in investment and credit policy, short-term prospects are subject to a considerable margin of uncertainty. In the longer run, some moderation in the high rates of industrial growth of the mid-1980s is certain. But even if growth settles at a rate of, say, 15 percent, China's economy will quickly find itself transformed, with industrial output in 1995 as much as four times what it was in 1985. One thing is clear; the 8-percent goals set for real industrial growth in the Seventh Five Year Plan (1986-90) are likely to be exceeded by a considerable margin.

In regional terms, China's coast will certainly remain the preeminent industrial area in virtually every sector, and the disparity between per-capita industrial output of coastal and interior provinces will widen.

The structure of industrial output is expected to continue to shift substantially towards more labor-intensive branches. Although the development of light industry has been rapid, consumer purchasing power has grown, and tastes have become increasingly more sophisticated. Priority will be given to higher quality and brand name consumer goods. With the bulk of light industrial goods being produced by small and medium plants, there will be more need for technological transformation than construction of wholly new plants. As state investment funds concentrate on heavy industrial projects, light manufacturing enterprises will increasingly come to rely on their own or foreign funds to upgrade and renovate existing capacity. (For more detail on investment, see Chapter 5.)

Above all, the program of piecemeal urban industrial management reforms, seeking to shift control of day-to-day enterprise management decisions from ministries and local officials to the plant manager, will continue to make headway, and, unless there is some unforeseen major shift in national leadership, seems likely to accelerate in the late 1980s and change the fundamental nature of Chinese industrial organization.

Table 3-6

STATISTICAL APPENDIX: INDUSTRIAL OUTPUT AND GROWTH

| (Item) | (Units) | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| Cotton Yarn | | | | | | |
| | (million tons) | 3.2 | 3.4 | 3.3 | 3.2 | 3.5 |
| | (percent growth) | 8.3 | 5.8 | -2.5 | -1.6 | 9.0 |
| Total Cloth | | | | | | |
| | (billion meters) | 14.3 | 15.4 | 14.9 | 13.7 | 14.3 |
| | (percent growth) | 5.9 | 7.6 | -3.1 | -7.9 | 4.4 |
| Chemical Fibers | | | | | | |
| | (thousand tons) | 527.3 | 517.0 | 540.7 | 734.9 | 945.0 |
| | (percent growth) | 17.1 | -2.0 | 4.6 | 35.9 | 28.6 |
| Woolen Piece Goods | | | | | | |
| | (million meters) | 113.1 | 126.7 | 142.9 | 180.5 | 210.0 |
| | (percent growth) | 12.0 | 12.0 | 12.8 | 26.3 | 16.4 |
| Paper and Paperboard | | | | | | |
| | (million tons) | 5.40 | 5.89 | 6.61 | 7.56 | 8.26 |
| | (percent growth) | .9 | 9.1 | 12.2 | 14.4 | 9.3 |
| Beer | | | | | | |
| | (million tons) | .91 | 1.17 | 1.63 | 2.24 | 3.08 |
| | (percent growth) | 31.9 | 28.6 | 39.3 | 37.4 | 37.3 |
| Cigarettes | | | | | | |
| | (million cases) | 17.0 | 18.9 | 19.4 | 21.3 | 23.5 |
| | (percent growth) | 12.1 | 10.6 | 2.8 | 10.0 | 10.3 |
| Bicycles | | | | | | |
| | (millions) | 17.5 | 24.2 | 27.6 | 28.6 | 32.4 |
| | (percent growth) | 34.7 | 37.9 | 14.0 | 3.7 | 13.1 |
| Sewing Machines | | | | | | |
| | (millions) | 10.39 | 12.86 | 10.87 | 9.35 | 9.86 |
| | (percent growth) | 35.3 | 23.8 | -15.5 | -14.0 | 5.5 |
| Total Television Sets | | | | | | |
| | (thousand sets) | 5,394 | 5,920 | 6,840 | 10,038 | 16,220 |
| | (percent growth) | 116.5 | 9.8 | 15.5 | 46.8 | 61.6 |
| Color Television Sets | | | | | | |
| | (thousand sets) | 152 | 288 | 531 | 1,340 | 4,100 |
| | (percent growth) | 375.0 | 89.5 | 84.3 | 152.2 | 206.1 |
| Cameras | | | | | | |
| | (thousands) | 623 | 742 | 926 | 1,262 | 1,800 |
| | (percent growth) | 67.1 | 19.1 | 24.7 | 36.3 | 42.7 |
| Household Washing Machines | | | | | | |
| | (thousands) | 1,281 | 2,533 | 3,659 | 5,781 | 8,830 |
| | (percent growth) | 422.9 | 97.7 | 44.5 | 58.0 | 52.7 |
| Household Refrigerators | | | | | | |
| | (thousands) | . . | 100 | 189 | 547 | 1,390 |
| | (percent growth) | . . . | . . | 88.7 | 190.4 | 153.9 |
| Metal Cutting Machine tools | | | | | | |
| | (thousands) | 102.6 | 99.8 | 121.0 | 133.5 | 155.0 |
| | (percent growth) | -23.2 | -2.7 | 21.2 | 10.3 | 16.1 |
| Automobiles | | | | | | |
| | (thousands) | 175.6 | 196.3 | 239.8 | 316.4 | 439.0 |
| | (percent growth) | -21.0 | 11.8 | 22.2 | 31.9 | 38.7 |

| (Item) | (Units) | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| Coal | | | | | | |
| | (million tons) | 622.0 | 666.0 | 715.0 | 789.0 | 850.0 |
| | (percent growth) | .3 | 7.1 | 7.4 | 10.4 | 7.7 |
| Crude Oil | | | | | | |
| | (million tons) | 101.2 | 102.1 | 106.1 | 114.6 | 125.0 |
| | (percent growth) | -4.5 | .9 | 3.9 | 8.1 | 9.0 |
| Natural Gas | | | | | | |
| | (billion cubic meters) | 12.7 | 11.9 | 12.2 | 12.4 | 12.9 |
| | (percent growth) | -10.7 | -6.4 | 2.3 | 1.8 | 3.5 |
| Electrical Power | | | | | | |
| | (billion kilowatt-hours) | 309.3 | 327.7 | 351.4 | 377.0 | 407.3 |
| | (percent growth) | 2.9 | 5.9 | 7.2 | 7.3 | 8.0 |
| Hydropower | | | | | | |
| | (billion kilowatt-hours) | 65.5 | 74.4 | 86.4 | 86.8 | 91.0 |
| | (percent growth) | 12.5 | 13.6 | 16.1 | .5 | 4.8 |
| Pig iron | | | | | | |
| | (million tons) | 34.2 | 35.5 | 37.4 | 40.0 | 43.6 |
| | (percent growth) | -10.1 | 3.9 | 5.3 | 7.0 | 9.0 |
| Steel | | | | | | |
| | (million tons) | 35.6 | 37.2 | 40.0 | 43.5 | 46.7 |
| | (percent growth) | -4.1 | 4.4 | 7.7 | 8.6 | 7.3 |
| Rolled Steel | | | | | | |
| | (million tons) | 26.7 | 29.0 | 30.7 | 33.7 | 36.8 |
| | (percent growth) | -1.7 | 8.7 | 5.9 | 9.8 | 9.1 |
| Cement | | | | | | |
| | (million tons) | 82.9 | 95.2 | 108.3 | 123.0 | 142.5 |
| | (percent growth) | 3.8 | 14.8 | 13.7 | 13.6 | 15.8 |
| Plate glass | | | | | | |
| | (million standard cases) | 30.6 | 35.5 | 41.7 | 48.3 | 56.1 |
| | (percent growth) | 10.6 | 15.7 | 17.5 | 15.9 | 16.1 |
| Sulphuric acid | | | | | | |
| | (million tons) | 7.81 | 8.18 | 8.70 | 8.17 | 6.69 |
| | (percent growth) | 2.1 | 4.7 | 6.4 | -6.0 | -18.1 |
| Soda ash | | | | | | |
| | (million tons) | 1.65 | 1.74 | 1.79 | 1.88 | 2.00 |
| | (percent growth) | 2.4 | 5.0 | 3.3 | 4.9 | 6.4 |
| Caustic soda | | | | | | |
| | (million tons) | 1.92 | 2.07 | 2.12 | 2.22 | 2.35 |
| | (percent growth) | .0 | 7.8 | 2.4 | 4.7 | 5.6 |
| Total Chemical fertilizer | | | | | | |
| | (million tons) | 12.4 | 12.8 | 13.8 | 14.6 | 13.4 |
| | (percent growth) | .6 | 3.2 | 7.9 | 5.9 | -8.6 |
| Chemical pesticides | | | | | | |
| | (million tons) | 484.0 | 457.0 | 331.0 | 298.5 | 205.0 |
| | (percent growth) | -9.9 | -5.6 | -27.6 | -9.8 | -31.3 |
| Plastics | | | | | | |
| | (million tons) | .92 | 1.00 | 1.12 | 1.18 | 1.21 |
| | (percent growth) | 2.0 | 9.5 | 11.8 | 5.3 | 2.4 |
| Mining equipment | | | | | | |
| | (thousand tons) | 114.9 | 158.2 | 201.6 | 258.1 | 301.2 |
| | (percent growth) | -29.3 | 37.7 | 27.4 | 28.0 | 16.7 |
| Power Generating Equipment | | | | | | |
| | (thousand kilowatts) | 1.40 | 1.65 | 2.74 | 4.67 | 5.61 |
| | (percent growth) | -66.7 | 17.9 | 66.6 | 70.6 | 20.0 |

SOURCES: State Statistical Bureau, **1985 Statistical Yearbook**, and 3/86 Communique on plan fulfillment.

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# CHAPTER FOUR -- Energy

## EXECUTIVE SUMMARY

**TRENDS**

- Rapid growth in energy output growth levels for March and April of this year signal a return to earlier patterns after the slowdown of late 1985 and the first two months of 1986.
- Accelerated declines in international oil prices have cut petroleum export earnings.
- Sustained energy conservation in industry, together with output growth, have for now eased the once-critical energy bottleneck.

**POLICY**

- Investment in energy remains a high priority.
- Petroleum export volumes are being cut as the State decides that domestic opportunity costs for oil are higher than potential export earnings.
- Very large projects requiring imported technology have been postponed.

**PROBLEMS**

- Energy's biggest problems are its low relative pricing, low level of technical sophistication, and geographic isolation.
- The world energy glut offers little hope for increases in energy prices in the short-term.

**PROSPECTS**

- China's plan to double energy output by 2000 is conservative.
- The best prospects for foreign participation are in coal and onshore oil.

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## TRENDS

China's energy sector has ceased to be the bottleneck it was perceived to be in the early and mid-1980s. Rapid and sustained increases in energy output from 1981 through mid-1985 and an effective energy conservation program have greatly mitigated the severity of China's chronic energy shortage. The energy sector remains plagued by low technology levels, both in primary production and secondary conversion. Falling world oil prices have lowered China's incentive to export, and volume exports of crude petroleum began to fall off in early 1986.

After slow growth and stagnation in 1980-81 and recovery in 1982, China's energy output grew at an average annual rate of over 10 percent from 1983 through the first six months of 1985. In the second half of 1985, however, energy output slowed significantly, so that by early 1986 official monthly energy growth was negative for coal, implying that output on a seasonally adjusted basis had declined precipitously in the second half of 1985. Just as in the energy slump of 1980-81, however, the slowdown at the end of 1985 was not the result of any technical or structural shortcomings in the industry, but rather had its origins in state investment cutbacks, reduced subsidies, and new controls on credit, all intended to slow the 1985 economy and moderate the pace of inflation.

The monthly data for later in the spring of 1986 show that energy output recovered in early 1986, but in the absence of seasonally adjusted data, the strength of the recovery is difficult to gauge without additional information.

Overall, however, it is safe to say that just as for industry in general, but to a somewhat more exaggerated degree, energy output responded sharply to new government macroeconomic controls in late 1985, and has since begun what may be an equally quick recovery.

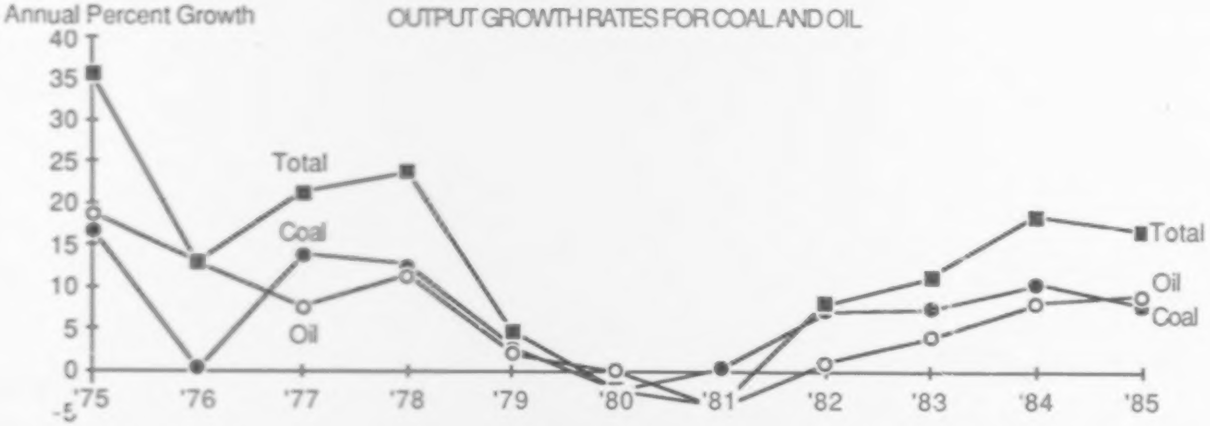
Table 4-1
PRIMARY ENERGY OUTPUT, 1975-86

| | COAL | CRUDE OIL | NATURAL GAS | HYDRO-POWER | TOTAL |
|---|---|---|---|---|---|
| | | (Percent Growth) | | | |
| **1975** | **16.7** | **18.8** | **17.5** | **15.0** | **17.2** |
| 1976 | .2 | 13.1 | 14.1 | -4.2 | 3.5 |
| 1977 | 13.9 | 7.4 | 20.0 | 4.4 | 12.3 |
| 1978 | 12.4 | 11.1 | 13.3 | -6.3 | 11.9 |
| 1979 | 2.8 | 2.0 | 5.7 | 12.3 | 2.7 |
| **1980** | **-2.4** | **-.2** | **-1.7** | **16.2** | **-1.6** |
| 1981 | .3 | -4.5 | -10.7 | 12.5 | -1.1 |
| 1982 | 7.2 | .9 | -6.3 | 13.6 | 5.4 |
| 1983 | 7.2 | 3.9 | 2.3 | 16.1 | 6.5 |
| 1984 | 10.5 | 8.1 | 1.7 | .5 | 9.6 |
| **1985** | **7.7** | **8.9** | **3.5** | **4.8** | **7.9** |
| | | (Million Tons Standard Coal Equivalent) | | | |
| 1985 | 607.14 | 178.45 | 17.11 | 11.17 | 813.87 |

SOURCES: Official State Statistical Bureau data. (J5AF30.R6D)

For coal, however, these fiscal and financial policies had a doubly contractionary effect, since the large state-operated mines are extremely sensitive to cuts in investment funds, while the local more independent small mines rely on bank credit for much of their operating capital. Each component accounts for roughly half of coal output. See Table 4-2, below, for monthly energy growth patterns according to official calculation methods. (For a discussion of these methods, see Chapter 3 on industry.)

Diagram 4-1



Although the time period is shortened, comparisons with energy output patterns early in the decade are instructive. China's respectable recovery in energy output after the 1980-81 recession is shown clearly in Table 4-1, above, which gives growth rates for major primary energy sources. The bottom row gives physical output levels for 1985, illustrating how coal dominates China's energy sector, providing three times more primary fuel than oil. Together, coal and oil account for almost all (96 percent in 1985) of China's energy output.

In spite of the late 1985 slowdown, coal's growth performance on an annual basis has been sustained since 1982, with output growing at decade-doubling rates (roughly 7 percent) since 1982. Overall, 1985 coal output exceeded the original official 790 million ton target by 60 million tons (data in Table 4-1 are in "standard tons;" actual output was 850 tons of raw coal). Oil output, again allowing for the late 1985 slow-down, has since 1983 enjoyed sustained, rapid expansion, with output growing 8.9 percent in 1985.

Table 4-2
GROWTH IN MONTHLY ENERGY OUTPUT 1985-1986

| Month | | Coal | Crude Oil | Natural Gas | Electricity | Hydro-Power |
|---|---|---|---|---|---|---|
| Growth Rates (Percent) | | | | | | |
| 1985 | Jan | 16.6 | 9.4 | 5.8 | 10.4 | 7.3 |
| | Feb | 10.3 | 9.0 | 6.1 | 4.6 | -2.8 |
| | Mar | 6.0 | 12.3 | 6.0 | 7.6 | 2.5 |
| | Apr | 11.6 | 12.5 | 13.9 | 9.9 | 14.1 |
| | May | 11.0 | 9.9 | 6.0 | 8.4 | 2.7 |
| | Jun | 18.7 | 11.1 | 7.8 | 9.2 | 6.8 |
| | Jul | 11.9 | 10.6 | 5.8 | 8.3 | -5.8 |
| | Aug | 9.2 | 7.6 | 5.5 | 7.1 | 5.3 |
| | Sep | 10.0 | 6.8 | 6.4 | 8.0 | 7.4 |
| | Oct | 9.0 | 6.6 | -2.3 | 8.4 | 3.5 |
| | Nov | 5.6 | 6.2 | 7.7 | 8.9 | 14.2 |
| | Dec | 9.3 | 5.9 | -9.8 | 10.4 | 9.6 |
| 1986 | Jan | -3.3 | 3.9 | .5 | 6.0 | -3.7 |
| | Feb | -3.7 | 1.4 | 8.9 | 6.4 | -7.8 |
| | Mar | 7.1 | .6 | 7.8 | 9.3 | -1.2 |
| | Apr | -1.6 | -2.0 | -5.0 | -2.4 | 20.7 |
| | May | 6.0 | 4.6 | 6.6 | 5.4 | 26.3 |
| Output * | | | (see the table in ch 3) | | | |
| | May | 75.83 | 10.84 | 1.20 | 37.57 | 8.60 |

* Reported as follows: Coal and Oil in million tons, Natural Gas in hundred million cubic meters, Electricity in billion kWh.

SOURCES: State Statistical Bureau, **Monthly Bulletin of Statistics** (in Chinese), electricity from **China Economic News**, various issues. March, 1986 through May, 1986 data from **China Economic News**. (j6bci01t.d6f,di)

The 1980-81 recession, rather than a planned slowdown for "readjustment" as often depicted by Chinese officials, was a reaction to severe budget cuts after the 1979 Vietnam fighting, sharply increased food subsidies, and excessive investment spending during the 1977-78 "mini-Great Leap." These budget cuts affected the subsidies on which the energy industry, and in particular coal, because of its low pricing, so heavily depends. In addition, 1981 investment levels fell dramatically, as illustrated in Table 4-3 below. This is especially true for the coal industry, where state investment fell by over 30 percent in 1981, and the oil industry, where investment fell by 16.3 percent.

Table 4-3
State Capital Construction in Energy, 1978-1985
(Million current yuan)

| | Coal Industry | Oil Industry | Power Industry | Total Energy* |
|---|---|---|---|---|
| 1978 | 3,180 | 3,112 | 5,091 | 11,470 |
| 1979 | 3,186 | 2,707 | 5,099 | 11,098 |
| 1980 | 3,347 | 3,338 | 4,814 | 11,565 |
| 1981 | 2,315 | 2,795 | 4,014 | 9,464 |
| 1982 | 2,985 | 2,530 | 4,623 | 10,223 |
| 1983 | 4,007 | 2,902 | 5,746 | 12,760 |
| 1984 | 5,514 | 3,063 | 7,699 | 16,673** |
| 1985 | N/A | N/A | N/A | 20,105** |

* NOTE: Total includes coking industry.
** Total from State Statistical Bureau, **Monthly Bulletin** (2/86)
SOURCES: Official State Statistical Bureau yearbooks.

As Table 4-3 illustrates, investment levels recovered in 1983, and have grown rapidly since then, increasing by over 30 percent in 1984. Total energy investment continued its strong expansion through 1985, increasing by 21 percent over 1984 levels in current-priced terms. This recovery and subsequent strong growth in investment point to continued output gains for both coal and electric power. Investment in the petroleum industry does not seem to have increased at a pace comparable to that for coal and power generation, and 1984 oil investment levels were still roughly 10 percent below the 1980 level.

China's strong energy output potential, confirmed by figures for production through the first six months of 1985 and the recovery in 1986 , has been unrelated to prospects for as-yet elusive successes in offshore exploration or completion of the large-scale coal mining operations planned for later in the decade. Offshore drilling has yielded disappointing results, and the highly visible Chinese-foreign ventures for coal extraction are not yet on line. For oil, the output growth has come from existing fields. In the past two years Chinese engineers have been relatively successful at increasing petroleum flows at fields where output was believed to have already peaked, such as Daqing. New on-shore oil discoveries and developments such as the Taklimakan desert basin have also contributed to growth.

For coal, output growth can be interpreted as resulting from decentralized management of mines. This is shown clearly in Table 4-4, below, where output from state-owned mines has grown 2.9 percent in the six years since 1979, while output from local mines has grown 9.1 percent -- more than three times as fast.

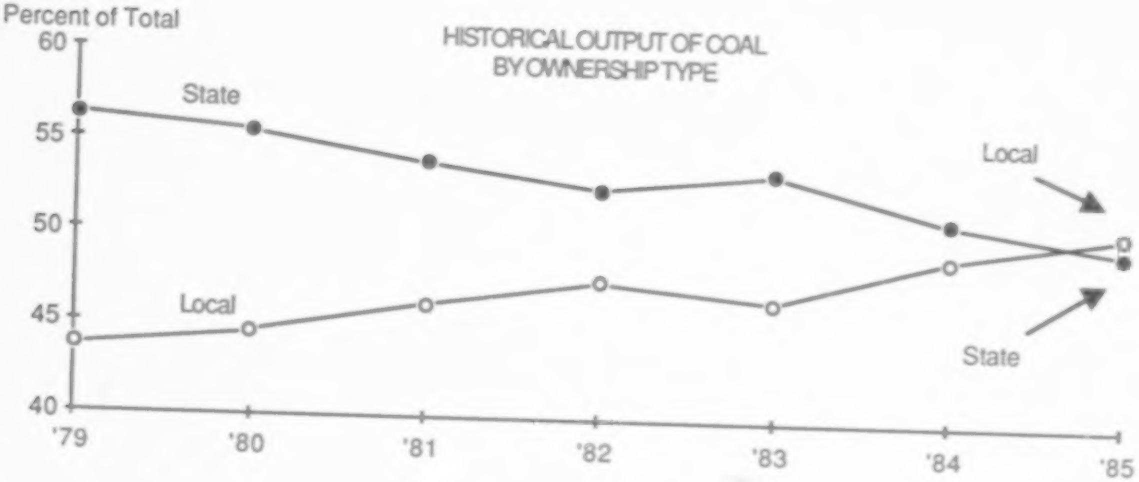
Table 4-4
HISTORICAL OUTPUT OF COAL BY OWNERSHIP TYPE

| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|---|
| Total Output (mn tons) | 636 | 620 | 622 | 666 | 715 | 789 | 850 |
| State Mines | 358 | 344 | 335 | 350 | 382 | 412 | 421 |
| Local Mines | 278 | 276 | 287 | 316 | 333 | 377 | 429 |
| Share of Total (percent) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| State Mines | 56.3 | 55.5 | 53.9 | 52.5 | 53.5 | 52.2 | 49.5 |
| Local Mines | 43.7 | 44.5 | 46.1 | 47.5 | 46.5 | 47.8 | 50.5 |

SOURCES: Official data and press releases. Breakdown calculated for 1984 and 1985 from 1985 output for local mines (reported in **China Economic News** 2/24/86, p. 1 as 429 million tons, 13.9 percent higher than 1984).

The share of output from local mines has risen further in 1985, from 48 to 51 percent of total output. In fact, output from local mines is growing much faster than planned. Preliminary data for 1985 indicate that local coal production grew at a rate of 14 percent over 1984, while output from state mines only grew 2.2 percent. This national trend is complemented by regional developments. For example, in Henan province, China's second largest coal producer (after Shanxi), first quarter 1985 output from small rural mines was twice that of the first quarter of 1984, while output from state mines lagged far behind.

Diagram 4-2



### Table 4-5
### ENERGY SUPPLY AND DEMAND IN CHINA, 1970-1984
(Million Tons Standard Coal Equivalent)

| | COAL | | | CRUDE OIL | | | TOTAL ENERGY | | |
|---|---|---|---|---|---|---|---|---|---|
| YEAR | Production | Consumption | Stock Changes and Net Exports | Production | Consumption | Stock Changes and Net Exports | Production | Consumption | Stock Changes and Net Exports |
| 1970 | 252.8 | 236.9 | 15.8 | 43.8 | 43.0 | .9 | 302.9 | 285.3 | 17.6 |
| 1971 | 279.9 | 273.2 | 6.7 | 56.4 | 55.2 | 1.2 | 344.3 | 336.4 | 7.9 |
| 1972 | 292.7 | 288.9 | 3.8 | 65.3 | 64.0 | 1.3 | 368.0 | 362.9 | 5.1 |
| 1973 | 297.7 | 292.7 | 5.0 | 76.7 | 72.7 | 4.0 | 387.1 | 378.1 | 9.0 |
| 1974 | 294.9 | 289.6 | 5.3 | 92.7 | 83.2 | 9.6 | 402.7 | 387.9 | 14.9 |
| 1975 | 344.1 | 326.4 | 17.8 | 110.2 | 95.7 | 14.5 | 472.0 | 439.1 | 32.8 |
| 1976 | 344.9 | 334.4 | 10.5 | 124.6 | 110.0 | 14.6 | 488.5 | 463.4 | 25.1 |
| 1977 | 392.7 | 367.8 | 24.9 | 133.9 | 118.4 | 15.5 | 548.6 | 508.1 | 40.5 |
| 1978 | 441.3 | 403.8 | 37.4 | 148.8 | 129.9 | 18.9 | 613.8 | 557.5 | 56.3 |
| 1979 | 453.4 | 417.8 | 35.6 | 151.8 | 127.7 | 24.1 | 630.6 | 570.9 | 59.8 |
| 1980 | 442.7 | 432.8 | 9.9 | 151.5 | 126.9 | 24.6 | 620.3 | 585.8 | 34.6 |
| 1981 | 443.8 | 432.4 | 11.4 | 144.7 | 118.4 | 26.3 | 613.6 | 575.9 | 37.7 |
| 1982 | 475.8 | 457.8 | 17.9 | 146.0 | 115.6 | 30.4 | 646.8 | 600.3 | 46.5 |
| 1983 | 510.2 | 483.9 | 26.3 | 151.7 | 121.8 | 29.8 | 688.7 | 632.7 | 56.0 |
| 1984 | 563.4 | 531.3 | 32.0 | 163.9 | 124.9 | 39.0 | 754.4 | 683.5 | 70.9 |

NOTE: Production and consumption for natural gas and hydroelectric power are included in the total but not shown.
SOURCES: Official statistics and RCR calculations (de018s.r5b, de).

Equally as important as increased output levels have been the rapid strides made by the Chinese in energy conservation. Since the mid-1970s, China has controlled domestic energy consumption, causing it to grow more slowly than output and allowing a larger and larger surplus to be either exported or added to inventories. Only in 1980 was the sudden slump in output not matched by an equivalent fall in consumption. Although data on consumption or change in inventories for 1985 are not yet available, there is evidence that energy consumption restraint has continued. A study from Shanghai, China's major industrial center, reported that of the energy consumed to raise output in the first five months of 1985, 80 percent came from energy conservation, while only 20 percent of the growth in output was fueled by new energy supplies. Table 4-5 below illustrates energy conservation since 1978 by showing the increase in consumption to be slower than the increase in output.

The large increase in petroleum exports registered in 1985 is further evidence of conservation gains. Crude oil export volume in the first two quarters of 1985 grew by 41.7 percent over the first half of 1984, far outstripping growth in output of 10.9 percent. Coal exports, however, fell by 2.4 percent in the same period, whereas output grew by 11.8 percent. This discrepancy may indicate success in conserving oil and in the campaign to convert energy users from petroleum to coal, largely so petroleum exports could be increased in the face of falling prices.

Table 4-6
ECONOMY-WIDE ENERGY SAVINGS, 1979-84

| | Overall Economic Growth | Energy Consumption | Energy Use per Unit Output |
|---|---|---|---|
| | (percent growth) | | |
| 1979 | 7.0 | 2.4 | -4.3 |
| 1980 | 6.4 | 2.6 | -3.6 |
| 1981 | 4.9 | -1.7 | -6.3 |
| 1982 | 8.3 | 4.2 | -3.8 |
| 1983 | 9.8 | 5.4 | -4.0 |
| 1984 | 13.9 | 8.0 | -5.1 |

SOURCES: Official statistics and RCR calculations (de02ls.r6d, de).

Table 4-6, above, compares overall economic growth with consumption of energy and shows the very large sustained gains from energy conservation through 1984. Comparable data on domestic energy consumption in 1985 are not yet available. As Chinese officials have pointed out, a portion of recent energy savings is due to changes in the economic structure. In part, this is due to a shift from heavy industry, a major consumer of energy, to light industry, where output value is higher per unit of energy input. However, this shift should not be over-emphasized, since heavy industry still represents half of industrial output. Within heavy industry, less efficient plants have been shut down. In both industry and agriculture, emphasis is shifting to higher value-added products, with correspondingly lower energy input per unit of output value.

Table 4-7
INTERNATIONAL ENERGY CONSUMPTION COMPARISONS, 1981

| | Per Capita GNP (US $) | Per Capita Energy (Kg Coal) | Per Capita Coal (Kg) | Per Capita Thermal Power (Kwh) | Thermal-Coal Ratio (x1000) | Energy Per GNP $ (Gram) | Coal Per GNP $ (Gram) |
|---|---|---|---|---|---|---|---|
| United States | 13,160 | 11,626 | 2,515 | 7.94 | 3.2 | 883 | 191 |
| Brazil | 2,240 | 1,101 | 66 | .10 | 1.5 | 492 | 30 |
| China | 310 | 618 | 436 | .12 | .3 | 1994 | 1406 |
| India | 260 | 210 | 128 | .11 | .9 | 808 | 490 |
| Japan | 10,080 | 4,649 | 791 | 3.43 | 4.3 | 461 | 78 |
| Korea, South | 1,910 | 1,563 | 669 | .98 | 1.5 | 818 | 350 |
| Germany, West | 12,460 | 6,053 | 2,011 | 4.81 | 2.4 | 486 | 161 |
| Poland | 5,635 | 5,799 | 3,872 | 3.12 | .8 | 1029 | 687 |
| U.S.S.R | 6,619 | 6,422 | 1,870 | 2.12 | 1.1 | 970 | 282 |

NOTE: Per capita Energy and Energy per GNP $ are measured in terms of standard coal units (7000 kcal/ton).
SOURCES: Various World Bank and U.N. publications, and other sources. For details contact Rock Creek Research.

China can achieve these energy savings because her overall use of energy is so inefficient by world standards. Table 4-7 above illustrates China's highly inefficient use of energy, and in particular the inefficient use of coal, the energy source on which Chinese industry is most dependent.

Data in Table 4-7 on energy and coal requirements per unit of GNP show how inefficiently China uses what energy resources it has. Japan, the most efficient energy user, produces more than four times as much with each unit of energy input. China uses more than twice as much coal per GNP dollar as Poland, the next most inefficient user. Poland is almost as reliant upon coal as China is. It is also interesting to see in Table 4-7 how little of China's coal is used to generate thermal electricity, reflecting both inefficient generation and large-scale direct use of coal for industrial purposes.

Electric power output growth in China has averaged 7 percent a year since 1980. Patterns of thermal power generation and shortage confirm the inefficient use of energy in general and the critical need for power generating and transmission capacity. In spite of consistent growth in electrical power generation over the last ten years (see Table 4-8 below), China's power supply still is unable to meet demand. Chinese officials consistently cite surveys which show that 30 percent of industrial capacity is idle at any given time because of electric power shortages.

In addition to using little of its coal to generate electricity, China generates thermal power inefficiently. China is about half as efficient as some advanced countries in this field; its efficiency is expected to improve as much as 40-50 percent by the end of the century. Data on China's generation of electric power are presented in Table 4-8, below.

Table 4-8
ELECTRIC POWER GENERATION, 1975-85

| | Thermal Power | Hydro-Power | Total |
|---|---|---|---|
| (percent growth rates) | | | |
| 1975 | 16.3 | 15.0 | 16.0 |
| 1976 | 6.3 | -4.2 | 3.7 |
| 1977 | 11.6 | 4.4 | 10.0 |
| 1978 | 20.6 | -6.3 | 14.9 |
| 1979 | 9.4 | 12.3 | 9.9 |
| 1980 | 4.5 | 16.2 | 6.6 |
| 1981 | .6 | 12.5 | 2.9 |
| 1982 | 3.9 | 13.6 | 5.9 |
| 1983 | 4.6 | 16.1 | 7.2 |
| 1984 | 9.5 | .4 | 7.3 |
| 1985 | 9.0 | 4.8 | 8.0 |
| (billion kilowatt-hours) | | | |
| 1985 | 316.3 | 91.0 | 407.3 |

Sources: Official Chinese data (de007s.r6d, de).

Hydropower accounts for a significant portion (22.3 percent in 1985) of China's electric power generation, but has grown more slowly than thermal power in the past two years. Growth in hydropower generation was rapid through 1983, but slowed to .4 percent in 1984, followed by growth of 4.8 percent for 1985. The 1984 slowdown in hydropower output was partially due to irregular rainfall patterns in many parts of the country, including serious drought in parts of North China, making analysis of overall trends difficult. Additionally, investment in hydropower has grown much more slowly than investment in thermal plants in recent years (20.1 percent from 1980 to 1983, as opposed to 31.4 percent for thermal), while investment in transmission facilities is growing at an even slower rate (3.2 percent from 1980 to 1983).

## POLICY

Major policy revisions in the energy sector in late 1985 and early 1986 have resulted in a decline in oil exports, postponement of very large projects such as the Three Gorges Dam, and redirection of China's commercial nuclear industry away from reliance on Western technology imports.

The six month decline in oil prices from 27 dollars per barrel to levels in the 15 to 18 dollar per-barrel range between late 1985 and early 1986 has severely cut foreign exchange earnings from crude sales, China's major export. For every price cut of one dollar per barrel, China (at late 1985 and early 1986 export levels) loses 200 million dollars. While it appeared in late 1985 that China was pursuing a policy of increasing the volume of crude exports to compensate for falling revenues, the China National Chemicals Import and Export Corporation announced in February that China would not increase crude exports over 1985 levels. In fact, exports have been declining this year. For export levels and growth rates of petroleum export volume, value, and average prices, see table 4-9 below.

Zheng Dunxun, president of the China National Chemicals Import and Export Corporation, has stated that the oil not exported would be used domestically. This policy is consistent with reports that most Chinese refineries have been operating at only 60-70 percent of capacity. In addition, recent imports of refining technology indicate that this area is receiving increased investment. In light of the demonstrated domestic energy shortage it seems likely that this policy of domestic use will continue as long as world oil prices remain depressed.

Table 4-9
CHINESE OIL EXPORTS, 1981-85

| | Volume | | | Dollar Value | | | Price Change | |
|---|---|---|---|---|---|---|---|---|
| | Crude Petroleum | Refined Petroleum | Total Oil | Crude Petroleum | Refined Petroleum | Total Oil | Crude Petroleum | Refined Petroleum |
| 1981 Level * | 13,870 | 4,670 | 18,540 | 3,268 | 1,376 | 4,644 | 236 | 295 |
| (percent growth) | | | | | | | | |
| 1982 I | 28.4 | 35.9 | 30.3 | 21.8 | 30.9 | 24.5 | -5.1 | -3.8 |
| II | 15.1 | 4.6 | 12.6 | 9.9 | -.1 | 7.0 | -4.7 | -4.5 |
| III | -3.8 | -13.0 | -6.2 | -11.0 | -15.9 | -12.5 | -7.3 | -3.1 |
| IV | -7.4 | 3.1 | -4.8 | -13.4 | -.6 | -9.7 | -6.2 | -3.6 |
| Average | 5.8 | 5.1 | 5.7 | -.4 | 1.2 | .0 | -5.9 | -3.7 |
| 1983 I | -9.4 | -9.6 | -9.5 | -18.7 | -16.1 | -17.9 | -10.3 | -7.1 |
| II | -11.9 | 15.8 | -5.6 | -24.3 | 9.4 | -15.2 | -14.0 | -5.4 |
| III | 22.8 | 6.7 | 18.9 | 10.9 | 8.6 | 10.2 | -9.7 | 1.8 |
| IV | 1.6 | -10.6 | -1.6 | -13.0 | -21.3 | -15.7 | -14.6 | -11.9 |
| Average | 1.0 | .0 | .7 | -11.4 | -5.8 | -9.7 | -12.2 | -6.0 |
| 1984 I | 35.2 | 13.3 | 29.3 | 27.3 | 5.6 | 20.2 | -5.5 | -6.5 |
| II | 63.5 | 13.6 | 49.6 | 51.8 | 2.0 | 34.6 | -7.3 | -10.3 |
| III | 23.1 | 21.1 | 22.7 | 3.4 | -5.1 | 1.0 | -16.4 | -21.7 |
| IV | 77.6 | 16.1 | 62.7 | 54.6 | -6.0 | 36.5 | -13.0 | -19.0 |
| Average | 48.5 | 16.1 | 40.4 | 32.2 | -1.0 | 21.8 | -11.3 | -14.6 |
| 1985 I | 56.1 | 18.0 | 47.1 | 51.0 | 10.8 | 39.5 | -3.7 | -6.1 |
| II | 30.9 | .0 | 24.4 | 30.3 | -2.0 | 21.8 | -.6 | -2.1 |
| III | 32.5 | -5.8 | 24.3 | 36.4 | -5.0 | 25.1 | 3.1 | .9 |
| IV | 32.1 | 27.7 | 31.4 | 32.3 | 45.0 | 34.9 | .0 | 13.4 |
| Average | 36.4 | 8.9 | 30.8 | 36.6 | 10.6 | 30.0 | .0 | 1.3 |
| 1985 Level* | 30,030 | 6,210 | 36,240 | 5,206 | 1,436 | 6,643 | 173 | 231 |
| 1986 I | -10.8 | -27.1 | -13.9 | N/A | N/A | N/A | N/A | N/A |
| 1986'I Level* | 5,779 | 1,101 | 6,881 | N/A | N/A | N/A | N/A | N/A |

Sources: Various issues of Chinese Customs Statistics. 1986'I figures from **China Economic News** (5/5/86).

* Levels are in 1,000 tons for volume, million dollars for value, and dollars per ton for unit value.

A further policy development has been an increased willingness to delay very large projects such as the Three Gorges Hydroelectric project. The projects which have been placed on hold generally are those which would have required large amounts of foreign exchange for imported materials or expertise. It appears that for the time-being, national policy-makers prefer smaller, domestically viable projects.

The Sunan nuclear station in Jiangsu Province is one such project which has been postponed. Originally meant to be China's second commercial nuclear plant providing power for domestic consumption (after the Qinshan plant and Daya Bay, which will provide power for Hong Kong), Sunan was to be built using largely imported equipment. Framatome, a French company, and Germany's Kraftwerk Union were negotiating for a contract to supply two 1,000 megawatt reactors for the plant. Neither company will receive the contract, however, because the Sunan plant has been postponed indefinitely. In a major policy speech in April, Vice Premier Li Peng announced that nuclear power had been relegated to a supplementary role in China's energy sector, and that China will rely on domestic technology for development of its nuclear industry. Li also announced that a mission would be sent to the Soviet Union to study nuclear power technology in that country.

These new policy directions dovetail with existing policies which give priority to increasing energy output and rationalizing consumption patterns through both direct and indirect government steps. Direct measures have centered around investment allocations and a well-developed price reform program, especially in the coal industry. Indirect measures include the general urban industrial reforms. These general reforms have substituted net earnings incentives for physical output targets, prompting energy conservation even in advance of price reforms.

Energy has continued to be a high priority in State investment policy. State capital construction investment in the energy industry reached 20.1 billion yuan in the first half of 1985, 21 percent higher than 1984. Investment in energy continues to make up the bulk of state capital construction in industry: 49 percent in 1984, but down slightly for 1985 to 43.4 percent.

In the coal industry, a combination of price and management reforms has been introduced to rationalize supply and consumption through market forces. The reforms have already brought out dislocation problems which will have to be solved not only for coal, but for the economy as a whole if the use of financial incentives is to succeed.

Price reform has dramatically altered the way coal is distributed and consumed. Just as for earlier reforms in agriculture, coal industry reforms were first experimented with at select coal mines. In 1983, a trial program was introduced in 22 mining administrations in China's eastern region to allow higher prices for coal production in excess of quotas. In addition, mines were allowed to sell above-quota coal to whomever they wished. Individual end-users, both state and local, were charged higher prices for deliveries over their standard orders. The ingenuity of the system is in its influence over decisions at the margin. It affects decisions about additional output and increased consumption without ruining the financial positions of subsidized state enterprises.

As part of the price reform program, wider variations in coal prices will be implemented to reflect different grades of coal. Industrial users are already beginning to pay higher prices. According to official announcements, the price of coal is being raised to encourage conservation and more efficient use. Thus, goes the official argument, higher coal prices should not result in higher prices for final products. The price of coal for household consumption is expected to remain stable, due to continued government subsidies meant to cushion politically unstable urban areas from the impact of price reform on living standards.

The management aspects of the experimental reforms include greater freedom given to coal mines, power companies, chemical plants, and other end-users to form joint ventures and compensatory ventures to coordinate production, transportation, and marketing. By late 1984, however, problems developed in supplying standing-order customers. It seems that the profit incentive and the return on new cooperative ventures caused coal to be diverted from traditional customers with standing orders to affiliates and other customers willing to pay higher prices.

The increasing responsiveness of industrial producers to macroeconomic control measures such as financial contractions has significantly affected energy output in late 1985 and early 1986. The steep decline in energy output registered in the first quarter of this year was more a result of lower state budget outlays for subsidies and tighter restrictions on previously generous credit than an indication of underlying structural or technological failings in the energy industry. Especially affected were the smaller local mines which are locally financed and depend in large measure on local credit and bank loans.

A further policy initiative in the coal industry is aimed at dealing with the isolation problem. Since most of China's coal is in Shanxi and the west, transport was seen as the only answer to the energy shortage on the east coast. As of mid-1985, the Coal Ministry had begun giving high priority to developing coal reserves in eastern China, with 21.7 percent of state mine development investments in 1985 allocated for that region. Coal reserves in east China are mostly in Shandong and Anhui provinces and are estimated by the Chinese at over 44 billion tons (5.9 percent of total Chinese reserves), not as plentiful as in western China, but of good quality.

In the petroleum industry, just as for coal, policy has focused on increasing output and rationalizing use. For petroleum, this has meant shifting discovery and development efforts to onshore fields, both new and existing. New technologies such as steam injection and the use of advanced drilling muds have improved the recovery rate of many older fields such as the Daqing field. Xinjiang's Qaidam basin, the Ordos basin in Inner Mongolia, and the Sichuan basin are all areas of interest for Western companies which have not been able to gain access to currently producing fields in the northeast. Although there have been a few good finds offshore, the results have been disappointing enough to make negotiations on a second set of drilling contracts more difficult for the Chinese. Rationalization of petroleum use, in addition to more traditional conservation efforts, has emphasized conversion of oil-burning facilities to coal-burning ones, primarily to make petroleum available for export.

One measure of the direct effort to produce more oil onshore is the emphasis on investment in technical updating and transformation in the petroleum industry. The oil industry received 15 percent of all such investment allocations in the early 1980's, more than double the level of technical transformation investment in the coal industry. From 1981 to 1983, technical transformation investment in oil grew at over 35 percent a year, much faster than for other industrial sectors.

Within China, the government has sought to restrain domestic use of oil in order to increase the amount available for export. In addition to encouraging consumption restraint, the government has pursued a policy designed to switch power generation and other industrial uses from oil to coal-fired boilers. The success of this policy is indicated by the relatively small increase (2.5 percent in 1984) in oil consumption, as compared to growth in oil output of 8.1 percent in the same year, and growth in coal consumption of 9.8 percent. As illustrated in Table 4-5, most of the increase in stocks and net energy exports for 1984 is from oil consumption restraint. This trend continued through 1985, with crude oil export volume growing by 36.4 percent, far outstripping output growth of 8.9 percent.

## PROBLEMS

In spite of rapid growth in recent years and good prospects for energy output growth in the near future, China's most serious energy problems remain the low level technical sophistication in primary production and secondary conversion of energy, extreme isolation of many of the best energy fields from major consumers in industrial centers, chronic shortages in both urban and rural areas, and a serious weakening in the international oil market on which China depends for a significant share of its foreign exchange earnings.

The low level of technical sophistication will be perhaps the most difficult for China to overcome without large expenditures of foreign exchange for design, equipment, and training from Japan and the West. The problem is most obvious and celebrated in the case of nuclear energy, but given the overwhelming importance of coal and petroleum in China's energy plans, the low technical level in these sectors is more critical. The coal and oil industries must modernize all aspects of energy extraction and conversion, not only to increase output, but also to improve health and safety conditions, which are particularly poor in China's many local mines.

Although energy output is growing most rapidly where demand for energy is highest, China's industrialization could proceed much faster and more economically if energy transport and transmission growth were as impressive as gains in output. Energy production in China's southern regions is very poor relative to needs, while the situation is just the reverse in the isolated North and Northwest. Roughly two-thirds of end-19[illegible]s 780 billion tons of proven reserves are in provinces in the north and northeast. High quality coal reserves are isolated, and transportation systems have been slow to develop.

For oil, the natural shortage of petroleum in the south and east accentuates regional disparities in total commercial energy availability. Although coal can be used in some applications in place of petroleum products, it is not as convenient as oil, and in many applications, substitution of coal is not possible. For hydro-electric power, regional differences are just as marked, with very little hydropower generated in the north and on the east coast, where industrial needs are the greatest.

Shortages in cities and some rural areas continue to be a major problem for the energy sector in spite of recent rapid growth in energy output. China's Ministry of Water Resources and Electric Power estimated the power shortage last year to be between 45 and 50 billion kilowatt-hours (roughly 12.5 percent of current output), an increase over previous years. According to recent reports, commercial energy supply in rural areas meets only 50-60 percent of demand. Given short supplies of commercial energy sources, rural dwellers resort to straw, firewood, and other natural sources for most (69 percent) of their energy needs. Commercial sources satisfy about a quarter of energy needs. (The corresponding figure for small towns is 43 percent.)

The electric power shortage is especially critical in urban areas. According to Chinese survey results, 30 percent of industrial capacity goes unused at any given time because of electric power shortages and sharing procedures. Sections of cities go without power on a regularly scheduled basis. Large scale projects, such as the Baoshan steel complex, have had to be delayed or scaled back due to insufficient power supply capability.

For Chinese energy exports, low world energy prices remain the biggest problem, affecting foreign earnings and direct foreign investment. For exports of onshore oil, low world oil prices mostly affect the Northeast, China's main source of crude for export. For regions without oil or access to the foreign exchange it earns, lower world oil prices are likely to stimulate economic growth, as petroleum which would have been exported is diverted to the domestic market and imports of refined petroleum products increase. The world oil glut has seriously weakened China's ability to induce foreign investment in offshore fields. A decline in world coal prices from a high of $50 a ton in 1982 to the present level of $40 a ton has detracted from investors' interest, although China could profit from lower equipment prices.

## PROSPECTS

While prospects for China's energy output growth and energy conservation are good in the short and intermediate future, unsophisticated technology could reduce the long-term potential for output growth and increased efficiency in conservation and use. The well-known Chinese goal of doubling 1980 energy output by the year 2000 is feasible, and possibly conservative, but will require the added productivity of Japanese and Western technologies. The extreme inefficiency of energy use illustrated in Table 4-7 shows great potential for savings. However, consumption savings will have to be close to 7 percent a year if output is to quadruple during the same 20-year period, as planned.

The strong growth in energy output since recovery from the 1980-81 recession is shown again in Table 4-10, below, in comparison to the growth rates required to meet Chinese energy output targets for 1990 and the year 2000. For coal and oil, historic growth rates have been significantly higher than the annual growth of 3.3 percent for coal and 3.7 percent for oil required to reach the 1990 target (one billion tons of coal and 200 million tons of oil).

Table 4-10
ENERGY OUTPUT AND GROWTH TARGETS, 1980-2000

| | Coal | Crude Oil | Natural Gas | Electricity |
|---|---|---|---|---|
| (Actual growth rates) | | | | |
| 1980 | -2.4 | -.2 | -1.7 | 6.6 |
| 1981 | .3 | -4.5 | -10.7 | 2.9 |
| 1982 | 7.2 | .9 | -6.3 | 6.0 |
| 1983 | 7.2 | 3.9 | 2.3 | 7.2 |
| 1984 | 10.4 | 8.1 | 1.8 | 7.3 |
| 1985 | 7.8 | 8.9 | 3.5 | 8.0 |
| (Target growth rates) | | | | |
| 1985-1990 | 3.3 | 3.7 | 5.2 | 6.2 |
| 1991-2000 | 2.2 | 3.5 | 5.6 | 8.1 |
| 1985-2000 | 2.5 | 3.6 | 5.5 | 7.5 |
| (Physical output and targets*) | | | | |
| 1980 Level | 620 | 106 | 14 | 301 |
| 1985 Level | 850 | 125 | 13 | 407 |
| 1990 Target | 1,000 | 150 | 17 | 550 |
| 2000 Target | 1,200 | 210 | 30 | 1,200 |

SOURCE: Official data and projections. 1990 gas target from **China Daily** 1/23/86, p. 2. (J5C003s.R6D).

NOTES: Growth rates shown for 1990 and 2000 are the annual rates required to meet official targets, based on 1985 output levels.

* Physical output and targets are in million tons for coal and oil, billion cubic meters for gas, and billion kilowatt-hours for electric power.

China's long-term goal of doubling coal output to 1.2 billion tons by the year 2000 is therefore conservative, given present growth rates, investment levels, and China's rich reserves. China produced 620 million tons of coal in 1980. To double that amount by the year 2000 would have required growth of 3.5 percent a year. Since actual growth has averaged slightly over 7 percent per annum from 1980 to 1985, doubling by 2000 will require annual growth of only 2.5 percent for the next fifteen years.

The combination of China's high absorptive capacity for technology transfer and the on-going managerial and incentive reforms are the main reasons for general optimism in the face of current energy shortages. This optimism represents a shift from generally held views on China's energy situation in 1980-81.

Short-term efforts to increase coal production will center on continued exploitation by the small, local mines which have been responsible for much of the recent growth in output. Long-term growth will come from large-scale open pit mines, to be exploited with foreign technological assistance. One example is the Occidental-Pingshuo coal joint venture agreement, completion of which augurs well for China's long term prospects of expanding coal production. The mine is to go into full operation sometime after September 1987, with projected annual capacity of 15.3 million tons.

With only spotty offshore drilling results, foreign oil companies will press for both better terms and greater access to onshore oil. The Chinese are more likely to grant such access, now that prospects for using offshore oil funds to pay for onshore exploitation have dimmed. Several foreign companies are already engaged in onshore surveying, but on a service contract basis, with eventual production sharing unlikely. Experts say the Chinese are most likely to initially offer only high-risk ventures the possibility of production sharing.

China has better prospects for expansion of the onshore oil industry. As with coal, the Chinese target of doubling output by the year 2000 to 200 million tons per year is probably conservative. Output in 1985 was 125 million tons. Given these growth rates, doubling by 2000 requires an annual growth rate of 3.6 percent. This should be possible even with poor offshore oil results.

The Chinese plan to quadruple electric power generation to 1.2 trillion kilowatt-hours by the year 2000, from 300 million kwh in 1980. By 1990, power output is to reach 550 million kilowatt-hours. However, Zhao Qinfu, deputy minister of Water Resources and Electric Power, has called for over achievement of the official target, to 600 million kilowatt-hours by the end of the decade.

Achieving these levels of power generation will require higher investment levels and faster growth rates than attained in the 1980-85 period. According to Chinese projections, power generation targets will require additions to capacity averaging ten million kilowatts per year for the next 15 years. In contrast, power-generating capacity added in the last five years has averaged 3.3 million kwh per year. To reach the goal of quadrupling by 2000, electric power generation must grow at an annual average rate of 7.5 percent, higher than the 6.2 percent average from 1980 through 1985, but consistent with the higher growth rates of the last several years (see Table 4-8). The 1990 target indicates slower growth from 1986 to 1990 (6.5 percent per year), and then faster growth of 8.1 percent per year until 2000.

According to Chinese projections, nuclear plants will provide 5 percent of China's electricity needs by the year 2000, with total generating capacity of 10,000 megawatts. With the postponement of the Sunan power plant, this may be an optimistic target. In any case, the Chinese regard nuclear power as a third-priority supplement to the already high levels of investment being made in high power lines for transmitting hydro and thermal electricity from the inland to industrial centers along the coast, and investment in coastal thermal power plants with railroads and ports to supply them with coal.

In spite of the high visibility of nuclear and offshore ventures, the strongest prospects for technology transfer are in the onshore oil and coal industries. Chinese demand for mining, drilling, refining, transmission, and other energy-related technologies is growing. For these reasons, China's coal industry is becoming more outward-oriented. Recent organizational changes at the China National Import & Export Corporation (CNIEC) and China National Coal Development Corporation (CNCDC) are geared to increasing economic and technical cooperation, according to a CNIEC official. In other words, these changes are meant to orient China's coal industry toward more joint energy ventures, technology imports, and coal exports. The dozen or so joint ventures now underway in the coal industry illustrate this outward orientation.

Coal exports are therefore also a major part of China's long-term energy development strategy, and also an important part of the agreements anticipated with foreign investors. Joint ventures increasingly involve production sharing (9.4 of the 11.9 million tons of washed coal expected to come out of the Occidental-Pingshuo mine are to be exported) and de-regulation in the coal industry. Shanxi province, China's biggest coal producer, was given the go-ahead to export 600,000 tons of coal in 1985, the first time Shanxi has exported coal directly. Provincial officials have stated that the income from direct coal exports will be spent on equipment and technology imports.

For the near future, despite strong growth in the first quarter of 1986, coal exports will not share the dramatic position in China's balance of payments now held by petroleum. By the middle or late 1990s, however, China could supplant traditional coal suppliers in large markets like Japan.

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## CHAPTER FIVE — Investment and Capital Construction

### EXECUTIVE SUMMARY

**TRENDS**

- **Investment has grown rapidly in the first quarter following an officially induced slowdown in late 1985.**
- **Non-budget investment has grown rapidly.**
- **Investment as a source of growth continues to be supplemented by increases in the productivity of capital.**

**POLICY**

- **Investment controls have developed into one of the major economic levers used by the government to control China's macroeconomy.**
- **Investment within the state plan will be directed toward technical transformation projects in the industrial sector, and capital construction in the energy and transport sectors.**
- **The pace of investment growth will be slowed.**

**PROBLEMS**

- **The traditional problems of overheated investment and incorrect incentives remain.**
- **Relatively arbitrary across-the-board cutbacks have made it difficult to discriminate between projects deserving funds and those which do not.**

**PROSPECTS**

- **Short-term (1986) investment levels should be lower than those of 1984 and 1985.**
- **State investment in bottleneck sectors, especially energy and transport, will increase.**
- **Non-state investment will increase in sophistication and quantity.**

### TRENDS

In quantitative terms, China's investment trends showed rapid growth through the middle of 1985, an officially-induced slowdown in the second half of the year, and a recovery in the pace of investment in early 1986. In more descriptive terms, Chinese policy-makers, unlike their counterparts in traditional communist economies, have increasingly stressed quality rather than quantity in making investment decisions by focusing on technical transformation rather than construction of new plants. A third major trend influencing China's investment patterns is the continued shift away from dependence on the state budget as a primary source of investment funds, instead relying increasingly on borrowed funds and funds generated from enterprise profits. These are the most general and significant characteristic of recent investment and capital construction trends.

A fourth important trend in the second half of 1985 brought attempts by the central government to reduce inflationary investment levels by reducing state outlays for capital construction and restricting loan funds, policies which resulted in a contraction in industrial output during late autumn and early winter (see Chapter 3 on industry). Finally, investment as a source of overall economic growth continued to be supplemented by the increased productivity of capital, largely as a result of the increased labor intensity of the economy and general increases in efficiency of capacity utilization.

These trends have been most apparent in recent statistics reflecting the decentralization of investment financing, the emphasis on technical renovation rather than construction of new plants, the introduction and strengthening of "responsibility systems" in the construction industry itself, and the increased importance of imported equipment and machinery. For enterprise management, the greater role given to competition, profit incentives, and enterprise management independence have also been important. In general, the improved quality of investment has been as important a contributor to the strong growth as the high level of investment itself.

Table 5-1
INVESTMENT AND SOURCES OF GROWTH
(Percent)

| | NMP Investment (Savings) Rate | Real NMP Growth | Growth due to Investment | Growth due to Other factors |
|---|---|---|---|---|
| 1975 | 33.9 | 8.3 | 7.9 | .4 |
| 1976 | 30.9 | -2.7 | 8.4 | -11.1 |
| 1977 | 32.3 | 7.8 | 6.8 | 1.0 |
| 1978 | 36.5 | 12.3 | 7.2 | 5.1 |
| 1979 | 34.6 | 7.0 | 8.5 | -1.5 |
| 1980 | 31.6 | 6.4 | 8.0 | -1.6 |
| 1981 | 28.5 | 4.9 | 7.2 | -2.3 |
| 1982 | 28.8 | 8.3 | 6.3 | 2.0 |
| 1983 | 29.7 | 9.8 | 6.6 | 3.2 |
| 1984 | 31.2 | 13.9 | 6.9 | 7.0 |
| 1985 | 33.4 | 12.3 | 7.6 | 4.6 |

SOURCES: Official data and RCR calculations (J5CBM51t.R5I).

The importance of both investment growth and investment quality can be seen in Table 5-1, above, which shows the increased share of national income committed to investment as well as the growth in the productivity of both investment goods and the national capital stock in general. The percent savings rate shown in Table 5-1 indicates how much of total output was in the form of investment goods rather than consumer goods (and hence, from the consumer's point of view, corresponded to money saved rather than money spent on consumption). Another term for this national savings rate, therefore, is the national investment rate. It is clear that the savings rate has grown steadily through 1985, following the state budget contraction of 1980-81. The increasing investment shares mean that investment is growing even faster than national income (NMP).

This rapid growth of investment is itself a strong source of overall economic growth. Table 5-1 shows that for 1985, 7.6 percent of the total 12.3 percent growth in the economy was due to the increase in capital stock brought about by investment. The rest of the growth, roughly 4.6 percent, was due to "other" factors which contributed to an increase in the average productivity of all China's capital stock. Together, these two components, increased importance of investment growth and quality improvements for China's overall economic expansion.

The increased average productivity of China's capital stock is caused by a number of factors, some of them technical and some of them related to policy. In a technical sense, because China is investing in improvements to existing capacity, small investments have often had a major influence on the productivity of large plants. In a second technical sense, many investments have increased the labor intensity of production, adding to the productivity of the capital associated with the larger labor force. Finally, in a policy sense, the farm and enterprise reforms have replaced physical output quotas with profit incentives, stimulating efficiencies in the acquisition and use of both raw materials and capital.

One important example of China's use and acquisition of capital is the surge in imports during 1985. China's 1985 imports were dominated by metals and producer goods, indicating that China is spending foreign exchange for capital goods as opposed to consumer imports. In spite of large trade deficits, imports in these two critical investment goods sectors have grown without interruption. Given low technology levels, the rapid increase in the importation of investment goods has made a major contribution to the improved quality of the overall capital stock and to its increased productivity documented above.

Table 5-2
STATE CAPITAL CONSTRUCTION INVESTMENT BY SECTOR, 1980-85

| Type | 1980 | 1981 (percent growth) | 1982 | 1983 | 1984 | 1985 | 1985 (Bil Yuan) |
|---|---|---|---|---|---|---|---|
| Total | 6.8 | -20.8 | 25.4 | 7.0 | 25.1 | 42.8 | 106.10 |
| Industry Total | 7.3 | -21.6 | 20.6 | 15.3 | 21.0 | 29.2 | 46.34 |
| Light Industry | 66.3 | -14.8 | 7.1 | -17.9 | 9.5 | 7.0 | 4.28 |
| Heavy Industry | -.7 | -23.2 | 24.1 | 22.5 | 22.8 | 32.0 | 42.07 |
| Of Which: Energy | 4.6 | -20.7 | 11.1 | 24.6 | 30.1 | 21.1 | 20.10 |
| Agriculture | -10.2 | -43.9 | 16.8 | 25.6 | 4.7 | 19.5 | 5.52 |
| Transport, Communication | -2.7 | -35.1 | 41.4 | 36.4 | 48.9 | 51.5 | 17.57 |
| Commerce & Foreign Trade | 38.9 | -2.0 | 28.4 | -25.3 | 21.6 | 57.0 | 4.85 |
| Other Departments | 13.1 | -7.9 | 29.7 | -16.2 | 30.3 | 87.8 | 31.86 |
| Of Which: Research, Culture,Ed,Hlth | 32.3 | -1.5 | 16.5 | -27.7 | 32.6 | -1.4 | 7.39 |

Sources: State Statistical Bureau, **1984 Statistical Yearbook**, pp. 306, 308; **China Economic News** 3/11/85, p. 6, 4/7/86, p. 7; State Statistical Bureau **Abstract**, 7/85, pp. 67-68. (J6BCK01S.N6F)

State budgets for 1984 and 1985 showed a renewed emphasis on investment, but the state investment pattern emphasizes heavy industry, transport, and "other" departments (perhaps with military significance). Table 5-2, above, shows the very low level of state investment in agriculture, light industry, and commerce. Investment in heavy industry, which includes investment in the critical energy sector, accounted for 42 of 106 billion yuan invested in 1985, while investment in the transport sector accounted for another 18 billion. Agriculture, by contrast, received only 5.5 billion in 1985 and light industry only 4.3 billion. Under the various industrial and urban reform programs, investment in light industry and agriculture is meant to be largely self-financed from enterprise and household earnings.

The overall historical pattern of investment ups and downs since 1980 is also given in Table 5-2, above. Most striking is 1981, when investment contracted throughout the economy. Less recognized is the much smaller investment slow-down in 1983, when light industry, agriculture, and, most significantly, "other" investment all contracted, reducing the overall investment growth rate from 25 percent to 7 percent. The 1983 slowdown is important because it shows a cyclical pattern which appears to have repeated itself again in 1985-86. Seasonally adjusted industrial output data for early 1986 indicate that industrial growth is recovering from its 1985 second-half slump, induced in part by an investment slowdown (see Chapter 3 on industry).

The general and more severe investment contraction in 1981 deserves comment because it represents an often misinterpreted phenomenon. Traditionally, Chinese officials have pointed to this "readjustment" as a deliberate policy to restructure the economy. In fact, the very large state budget deficits of 1979-80 forced drastic cutbacks in state expenditures focused primarily on state investment. The budget deficits, far from planned, seem to have resulted from a combination of war expenses related to the 1979 conflict with Vietnam, new heavy food subsidies in 1980, and in general very large investments from the mini-great leap of 1978-79. This same 1981 investment contraction was responsible for the fall in heavy industrial output that same year.

Just as investment levels have grown very rapidly since the slump in 1981, the sources of investment funding have undergone dramatic change. As part of China's effort to make enterprises more efficient and enterprise managers more accountable, banking reforms are shifting the source of investment funds from state budget allocations to bank loans requiring the payment of interest. (See chapter 6 for more on Banking and Finance.) Cooperatives and even state-owned enterprises are raising capital by selling bonds and quasi-securities. In 1985, non-state budget investment in fixed assets reached 116 billion yuan, a 60.5 percent increase over 1984. As a result, it accounted for over 70 percent of total investment. As an example of the steps taken to raise such funds, the city of Tianjin collected 300 million yuan of "social funding" from individuals and groups for investment in the building materials, metallurgy, chemical, machine-building, communications, textiles, commerce, and service industries. Even farmers in the region raised almost 8 million yuan for investment in 49 local businesses.

Monthly data for the second half of 1985 show a continuation of the trend towards independent sources of investment, although the statistical picture for the year overall may be exaggerated by the government's attempt to slow down the economy. Cutting back on state expenditures for capital construction may have temporarily reduced the state share in investment funding below the level it would have been without the artificially induced contraction.

Table 5-3
PLAN AND NON-PLAN CAPITAL CONSTRUCTION INVESTMENT IN 1984
(billion yuan)

| Type | | Total Investment | Status in State Plan | |
|---|---|---|---|---|
| | | | Plan | Non-Plan |
| Total Investment: | | 105.0 | 69.0 | 36.0 |
| Budget Status: | Budget | 47.9 | 31.6 | 16.3 |
| | Non-Budget | 57.1 | 37.4 | 19.7 |

SOURCES: Official State Statistical Bureau data (J5BY64T.T5G).

The increased sourcing of investment funds outside the state budget has meant that investments have also increasingly been outside the control of the state plan, a trend which has greatly irritated central policy-makers who feel that many non-plan investment decisions are of lower strategic value for the economy.

Diagram 5-1

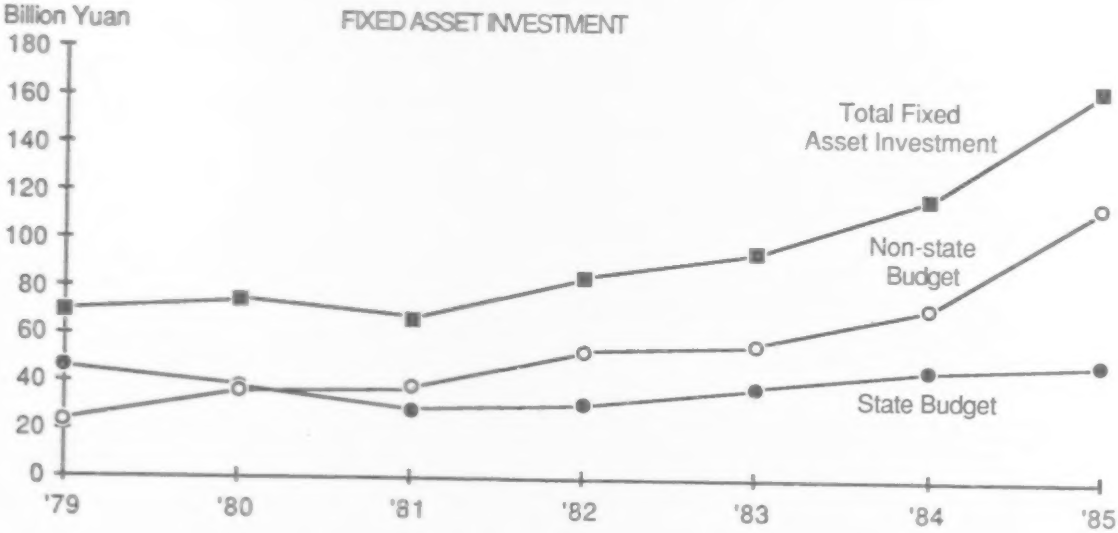


Table 5-3, above, shows the relationship between 1984 investments in the state budget and those controlled by the state plan; it is clear from the table that not all state budget funds are in the plan and many investments in the plan are funded from non-plan sources. In 1984 more than a third of all investment was outside the control of the state plan. Because of "excessive" investment "outside" the budget, many scarce and expensive materials were increasingly diverted from state to local projects. As a result, the state project completion rate fell from 24.4 percent in the first half of 1984 to 15.6 percent in the first half of 1985.

Table 5-4
SOURCES OF FUNDS INVESTED IN FIXED ASSETS BY STATE-OWNED UNITS 1978-1985

| Year | Total Fixed Asset Investment | | | | Capital Construction | | Technical Transformation | |
|---|---|---|---|---|---|---|---|---|
| | Total State Fixed Asset Investment | State Budget | Non-State Budget | Non-State as % of Total | State Budget | Non-State Budget | State Budget | Non-State Budget |
| (Billion Yuan) | | | | | | | | |
| 1979 | 69.9 | 46.2 | 23.7 | 33.9 | 41.9 | 10.5 | 4.4 | 13.2 |
| 1980 | 74.6 | 38.2 | 36.4 | 48.8 | 34.9 | 21.0 | 3.3 | 15.4 |
| 1981 | 66.8 | 28.6 | 38.1 | 57.0 | 25.2 | 19.1 | 3.5 | 19.0 |
| 1982 | 84.5 | 31.0 | 53.6 | 63.4 | 27.7 | 27.9 | 3.3 | 25.7 |
| 1983 | 95.2 | 38.7 | 56.5 | 59.3 | 34.6 | 24.8 | 4.1 | 31.7 |
| 1984 | 118.5 | 46.2 | 72.3 | 61.0 | 40.4 | 33.9 | 5.8 | 38.4 |
| 1985 | 165.2 | 49.2* | 116.0* | 70.2* | 41.4 | 64.7 | 7.7* | 51.3* |
| (Percent Annual Growth) | | | | | | | | |
| 1980 | 6.7 | -17.3 | 53.3 | | -16.6 | 99.8 | -24.4 | 16.5 |
| 1981 | -10.5 | -25.1 | 4.8 | | -28.0 | -8.7 | 5.8 | 23.2 |
| 1982 | 26.6 | 8.1 | 40.6 | | 10.0 | 45.7 | -5.5 | 35.4 |
| 1983 | 12.6 | 24.9 | 5.5 | | 25.0 | -10.9 | 23.9 | 23.4 |
| 1984 | 24.5 | 19.5 | 27.9 | | 16.8 | 36.7 | 42.3 | 21.1 |
| 1985 | 39.4 | 6.4* | 60.5* | | 2.6 | 90.8 | 33.7* | 33.7* |

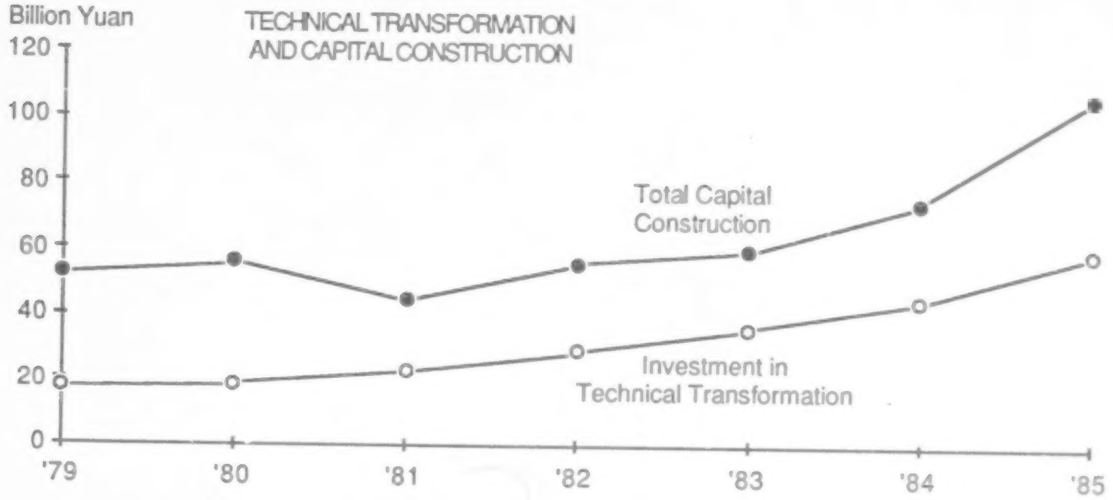
* Assumes that budget and non-budget technical transformation investment grew at the same average rate for both.

Sources: State Statistical Bureau, **1984 Statistical Yearbook**, pp. 303, 333; **1985 Statistical Yearbook**, p. 450; **Tongji**, No. 5, 5/86; (J6BCK03S.N6F).

This diversion of scarce construction materials, as well as rapid inflation in the price of many industrial products, led to efforts to contract overall investment in the second half of 1985. Monthly data show that there was a cut in state investment in August-September, a sharp but temporary cutback in loaned funds in October, but almost no change whatsoever in investment financed by funds generated internally by enterprises. The state was successful to a degree in slowing the economy by cutting investment, but the state's contractionary efforts were much weaker than in 1981, precisely because state budget investment funds are now a much smaller share of all investment funding.

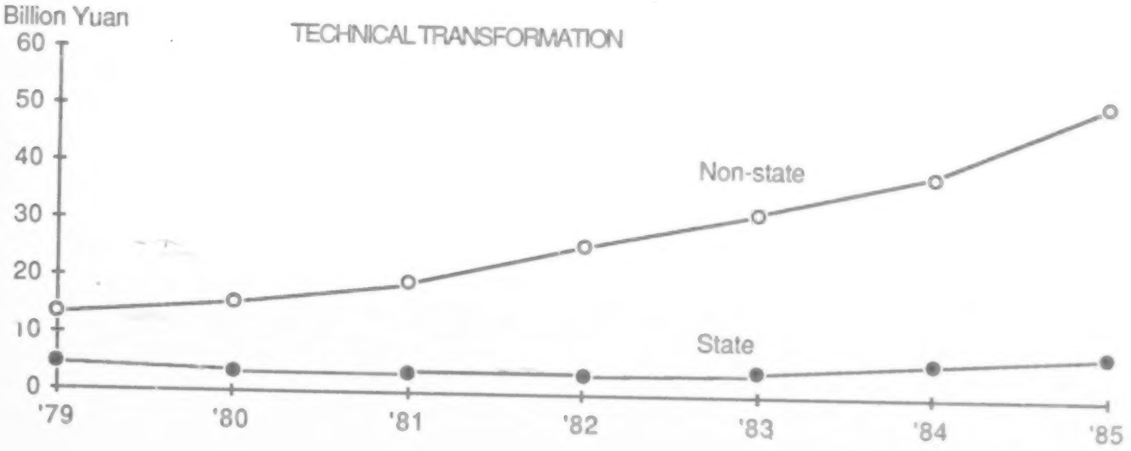
Two of China's major investment trends described above, improved investment quality and increased non-state funding, are combined in so-called "technical transformation investments," perhaps the single most significant element in China's evolving investment pattern. Table 5-4, above, presents available information on the share of technical transformation investment by state-owned enterprises. The statistics show that, unlike new capital construction, technical transformation investments have been largely financed from non-budget funds. The important conclusion to draw is that the financial decentralization of investment funding has enhanced increases in the efficiency and quality of investment.

Diagram 5-2



Emphasis on renovation rather than new plants is important because renovation doesn't need as much new land and requires less construction and fewer other civil works. Most Chinese projects split investment between construction of buildings, warehouses, roads, power lines, and other civil works on the one hand, and purchase of equipment and technical training services on the other. Technical renovation relies almost entirely on purchases of equipment and improvements in management and production methods, with construction and civil works playing a secondary role.

Diagram 5-3



Technical transformation has two key benefits of relevance to China's current situation: it saves on foreign exchange because it doesn't require whole plants (only core quality-related technology), and it introduces quality-product technology without unnecessary and expensive labor-saving technology. It also saves on building construction and other civil works investments. Given China's need to cut back on construction costs, technical upgrading is a viable partial solution to generally high overall investment requirements.

Table 5-5
STATE AND COLLECTIVE INVESTMENT IN 20 KEY CITIES, 1984
(Billion Yuan)

| City | Total State and Collective Investment | Total State Investment | State Investment as share of Total (%) | Technical Updating by State | Technical Updating as share of Total (%) | Total Investment in Residence | Investment in Residences Per Capita |
|---|---|---|---|---|---|---|---|
| Shanghai | 8.91 | 7.00 | 78.6 | 2.26 | 32.3 | .82 | 68.1 |
| Peking | 7.47 | 5.28 | 70.7 | 1.53 | 29.0 | 1.02 | 108.2 |
| Tianjin | 6.41 | 3.41 | 53.2 | 1.21 | 35.5 | .71 | 89.0 |
| Guangzhou | 3.22 | 2.52 | 78.4 | .85 | 33.8 | .61 | 86.7 |
| Shenyang | 2.27 | 1.28 | 56.4 | .48 | 37.2 | .40 | 76.0 |
| Nanjing | 2.15 | 1.21 | 56.4 | .31 | 25.8 | .23 | 49.9 |
| Wuhan | 2.06 | 1.36 | 65.7 | .59 | 43.7 | .29 | 48.7 |
| Chongqing | 1.95 | 1.27 | 65.2 | .52 | 40.6 | .06 | 4.4 |
| Dalian | 1.83 | 1.08 | 59.0 | .41 | 38.3 | .22 | 46.2 |
| Taiyuan | 1.67 | 1.26 | 75.4 | .36 | 28.1 | .24 | 19.4 |
| Chengdu | 1.38 | 1.00 | 72.0 | .36 | 35.9 | .22 | 25.7 |
| Qingdao | 1.38 | .57 | 41.2 | .35 | 62.0 | .15 | 23.8 |
| Xian | 1.28 | 1.03 | 80.7 | .32 | 31.5 | .23 | 42.0 |
| Kunming | 1.23 | .74 | 59.8 | .27 | 36.9 | .16 | 50.5 |
| Harbin | 1.23 | .93 | 75.3 | .30 | 32.4 | .24 | 63.7 |
| Anshan | 1.04 | .74 | 70.4 | .54 | 73.7 | .14 | 52.5 |
| Lanzhou | 1.04 | .84 | 80.6 | .30 | 36.2 | .16 | 67.8 |
| Changchun | 1.02 | .62 | 61.1 | .14 | 23.2 | .20 | 34.2 |
| Jinan | .97 | .48 | 49.4 | .21 | 43.6 | .12 | 34.2 |
| Fushun | .76 | .50 | 65.4 | .24 | 48.6 | .11 | 52.6 |

Source: State Statistical Bureau, **1985 Statistical Yearbook**, pp. 53-181; (J6BCK02S.N6F)

The widespread importance of technical upgrading, as well as the regional variation in housing investments, are clear from data on twenty key cities presented in Table 5-5, above. First, the statistics confirm that for virtually all cities the state-owned units receive the large majority of investment goods. Second, the data show that technical transformation is a major component of the investment of every city, ranging from roughly one-quarter to three-quarters of the total, with more than half of the cities dedicating at least 35 percent of all investment to that use.

Finally, the very great variation in housing investment levels, especially when measured on a per capita basis, reveals the political nature of urban housing, in a double sense. In the first place, in Peking and Tianjin, where political elements are strongest, urban housing has clearly been given the highest priority. On the other end of the political spectrum, Guangzhou, perhaps the most independent of the large cities, has the next largest commitment to housing. This may be related to the number of foreign businesses resident in each location. In any event, the variation is conspicuous and is just one example of the regional diversity which is so much a part of China's current economic evolution.

In general, the rapid growth in non-productive investment reflects the historically chronic neglect of housing during the Maoist period, a neglect which the more decentralized and market-oriented investment process is moving quickly to correct.Non-productive investment -- that is, investment in housing, hotels, meeting halls, and similar types of buildings that do not yield a measurable output in physical commodities -- was postponed in late 1985 in some parts of China, most notably in Peking and Tianjin, in response to a central government call for an overall investment slowdown. As a portion of total investment, non-productive investment fell from 43 percent in 1981 to 40 percent in 1984. In 1985, non-productive investment dipped during the second half of the year but increased sharply in December, making up 45.7 percent of total investment in 1985.

## POLICY

The most important policy directions in 1985-86, reflected in the Seventh Five Year Plan (1986-90), are the emphasis on technical renovation and the continued change in funding sources for fixed asset investment, particularly capital construction. Investment within the plan will emphasize technical transformation and renovation, will continue to stress investment in the critical energy sector as well as the transport sector, and will de-emphasize agriculture and light industry, which are expected to be largely self-financed from enterprise and household earnings. Additional policy priorities are the slowing of the overall pace of investment and the improvement of the quality and completion speed of construction projects.

To slow the high rate of capital construction investment, central and local authorities have instituted various measures, including a construction responsibility system, a nationwide review of the rate of completion of capital construction projects, and the institution of a system of priorities for completion of projects already undertaken. In spite of these efforts, capital construction investment has continued to grow rapidly, and state finance officials have indicated that it may take up to two years to bring the level of investment in line with the growth of the national economy.

The State Council announced in early September, 1985 that investment in capital construction throughout China will be restricted to the level assigned by the State, without exceptions. Banks were instructed to stop lending for projects not in the State plan and, in a move to control out-of-budget capital construction investment, the State Council also stipulated that self-generated investment funds deposited with the Construction Bank after June 30 could not be used for capital construction projects in 1985. In addition, banks were encouraged to use feasibility studies to judge the credit-worthiness of new projects. For example, the China Investment Bank, which has responsibility for construction funds and investments and credits from abroad, has formally instituted World Bank-style project appraisal methods.

Authorities have also announced that certain types of construction now underway will be given priority for completion. Peking municipality has indicated that housing, hospitals, schools, buildings for foreign affairs departments, and joint-venture projects with foreign funds for which contracts have been signed will be targeted for completion first. Construction of office buildings, exhibition halls, and auditoria will be suspended. In the second half of 1985, Tianjin municipality postponed construction of hotels and guest houses that were not urgently needed and concentrated on completing housing and urban utility projects instead.

A construction and investment responsibility system has been implemented in the State's effort to improve the quality of construction, shorten completion times, and make bankers and managers accountable for the investment in construction. In 1985, 169 contracts for key projects were awarded on the basis of "properly organized construction schedules," and 120 of these (71 percent) adopted the investment responsibility system. Of more than 140,000 projects under construction by state construction enterprises, 110,000 (79 percent) adopted various forms of the contract responsibility system.

Construction bureaus have been told to adopt open bidding systems to cut costs and improve delivery and completion times. During the first three quarters of 1985, state construction enterprises bid for more than 4,600 residential construction projects covering a construction area of 12 million square meters, more than 10 percent of the total construction area. The cost of these projects was approximately six percent lower than budgetary estimates, and construction times were shortened by an average of 20 percent.

To improve construction project completion rates and to alleviate the shortage of building materials, the State has ordered a nationwide check on the speed of construction. Peking and Tianjin have already reduced municipally-controlled capital investment.

Finally, the Seventh Five-Year Plan (1986-90) explicitly aims to "shift the emphasis of development to the technical transformation, renovation, and expansion of existing enterprises, and have them expand reproduction chiefly through intensive means." Furthermore, technical renovation will be emphasized in old industrial cities and bases, such as Shanghai, Tianjin, Shenyang, and Dalian. Under the Seventh Five Year Plan, investment in technical transformation will constitute 30.8 percent of total fixed assets investment, compared to 27.9% of the total during the Sixth Five Year Plan. Total investment in technical transformation and renewal for state enterprises and institutions will total 276 billion yuan during the Seventh Five Year Plan period, an 87 percent increase over investment during the Sixth Five Year Plan period.

## PROBLEMS

In addition to traditional problems of overheated investment and irrational prices giving incorrect investment incentives, the experience of 1985-86 has revealed an additional contradiction in the efforts to control for these shortcomings. The standard policy move to control investment is across-the-board cut-backs for certain categories. But these relatively arbitrary cuts have not been able to discriminate between investments deserving encouragement and others which do not. In short, the effort to choose investments well, already made difficult by the absence of a more rational price system, has been further frustrated by the efforts to control the overall level of investment.

As indicated in earlier sections, over-ambitious capital construction investment, due mainly to the great increase in locally-financed or out-of-budget projects, is one of the most serious problems facing China's economic planners this year. The construction boom itself is causing serious problems in other areas of the economy as well. The main cause for concern over growing out-of-budget investment arises from the fact that much of it is undertaken without regard to state economic plans or market demand for the products that will be produced by the new projects. Another problem arises as more enterprises and local authorities undertake expansion and construction projects with the funds they have accumulated for investment; local and out-of-budget projects siphon critical building materials away from state projects. Already scarce resources are spread over a growing number of construction projects and the completion of state-planned projects lags behind schedule. The quality of construction projects has suffered, and construction materials have been wasted.

Local officials do not always investigate the market potential for the products of new factories that they are constructing with self-generated investment funds. A major reason is that prices before 1985 were fixed at high levels for many manufactured goods, reflecting Maoist policy which made them "luxury" goods that were sold to absorb excess purchasing power. These high prices, however, did not result from any large demand for such products, which were and still are often of marginal quality. So, current investment programs inspired by plans for profits from such "luxury" markets have poor prospects and have caused investment funds to be wasted and scarce building materials to be tied up in uncompleted or idle new factories. For example, one study showed that when all refrigerator and automobile manufacturing plants now under construction are completed, capacity will far exceed estimated long-term demand.

## PROSPECTS

The prospects for investment in China point to slower investment growth in 1986, although the growth will still be quite high by international standards. It is interesting that this slow-down will be brought about in part through indirect measures, especially higher interest rates, credit restrictions, and price adjustments for critical bottleneck materials as well as for final goods. Sources of investment funds will show two quite separate trends. One trend is resurgent state budget participation in investment funding, concentrating on major bottleneck heavy industrial sectors. The other is a growing sophistication of investment funded by private borrowing and the use of retained earnings. Future investment should lead to growth not only from new productive capacity, but also from the enhanced productivity of existing assets, as more labor-intensive methods and better management make better use of plant and equipment. Finally, the serious shortage of modern technology and quality control suggest a strong and growing role for Western and Japanese capital goods. China appears to be husbanding its scarce foreign exchange for precisely this purpose.

The new 1986-90 five-year plan stresses that a slowdown in economic growth will occur gradually during 1986-87, but strong third-quarter 1985 signs of investment controls probably mean that investment growth in 1985 will be cut back significantly, although not nearly so severely as in 1981. According to the Seventh Five Year Plan, state capital construction investment will remain at about 1985 levels for 1986 and 1987. Given the target of average annual growth of 7 percent through 1990, this implies 12 percent annual growth in state capital construction from 1988 to 1990. Nevertheless, by international standards, China's share of capital accumulation in national income will remain very high at roughly 29 percent. This continued high rate of saving and investment, in turn, will be a major stimulus to overall economic growth.

In the past, fluctuations in non-budget and overall investment have been brought about by relatively direct administrative controls over funds and their use. With the urban industrial and banking reforms in place since 1984, central authorities will have to learn to use more indirect measures, and one of the likely candidates is the interest rate. Higher interest rates for bank loans and deposits will have a dual effect, rationing investment funds to the more profitable projects and attracting enterprise funds for deposit which might otherwise be used for less optimal projects. In addition, higher domestic interest rates will make borrowing from foreign banks a more attractive option for domestic enterprises. In this case, a guarantee of foreign exchange available for repayment will become the deciding factor for many prospective loans. The attractiveness of foreign interest rates, however, will also be affected by movements in China's foreign currency exchange rate.

If Chinese borrowers anticipate devaluations to match China's inflation relative to world price changes, they will see that foreign interest rates are higher than they in fact appear. This is because loans will be denominated in dollars or yen, and a devaluation will require more Chinese yuan for repayment of the same foreign exchange loan. If there is a major devaluation at the same time that domestic interest rates climb, individual enterprises, with their new freedoms to use foreign sources, might gamble that further devaluations are a long way off and start borrowing internationally. The withholding of official guarantees for hard currency repayment to foreign lenders will then become an important credit-control mechanism.

The division of Net Material Product growth into its investment and "other" components in Table 5-1, above, allows speculation about future economic growth. With urban reforms and the roughly 20 percent pace of industrial growth in 1985, and in spite of relatively poor weather for agriculture, non-investment sources of growth in 1985 declined only slightly. For how many years can China enjoy this boost to its overall growth? Given the large inventory of inefficient capital assets, such "bonus" growth could continue into the 1990s. Given the surprising speed with which official policy succeeded in slowing the economy in late 1985 and the equally rapid recovery apparently under way in early 1986, the pattern of sustained growth enhancement from extra capital productivity is likely to continue. If this is the case, per capita income in the intermediate- and long-run could rise much more rapidly than is generally anticipated.

Since China's initial opening to the West and Japan in the late 1970s, acquisition of foreign technology has been a consistently important part of investment planning. Patterns of imports over the last 12 months have confirmed this bias for capital goods. At the same time, China has shown itself increasingly willing to import capital goods and raw or semi-finished materials to alleviate critical bottlenecks (see chapter 7 on trade and payments). The Vice Director of the State Planning Commission stated in March of this year, at the height of the foreign exchange run-down, that foreign investors will be encouraged to increase the production of goods whose quantities now fall short of domestic demand. China is also seeking foreign cooperation to develop sources of raw materials and to modernize existing plants and equipment. The announcement of production goals for the 1986-1990 five-year plan was followed by a list of cooperative projects to be discussed with foreign firms. For example, non-ferrous metal production is to be doubled in the next five years under the Plan and China will soon be offering cooperative projects in this area to foreign investors.

In sum, China's sustained investment growth is a fundamental part of the overall process of rapid development apparently now under way. The policies and programs now being implemented point to good prospects for both continued long run increases in not only investment levels but also investment quality. In the effort to improve quality, foreign methods, equipment, and materials will play increasingly important roles.

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## CHAPTER SIX -- Banking and Finance

### EXECUTIVE SUMMARY

**TRENDS**

* "Radical" reform experiments are allowing for the lease of enterprises to managers and enterprise issuance of negotiable bonds and securities.
* 1985 state budget revenues grew 27 percent, reflected large enterprise tax receipts, and resulted in a small surplus.
* State budget expenditure shifts reflect a reduced state role in 1985-86 investment, and a shift to government services more closely associated with market economies.
* The sharp slowdown in the late-1985 money supply growth and its early 1986 resurgence coincided and probably influenced matching cycles of industrial contraction and recovery.

**POLICY**

* Leaders in both the Ministry of Finance and the People's Bank of China strongly support the overall industrial reform movement with their increasingly bold financial reforms.
* Official policy is to move in the direction of financial markets with discounted and rediscounted financial trading.

**PROBLEMS**

* Budgetary expenditure cuts and subsequent spending sprees are too crude a mechanism for controlling growth and inflation.
* The banking system controls too little of China's money supply, and market freedoms will reveal the inflationary mismatch between circulating purchasing power and available goods and services.

**PROSPECTS**

* What are essentially "radical" reforms in banking and enterprise finance will continue and spread.
* The state budget will continue to be roughly balanced, in spite of increased subsidies and moderating tax revenues.

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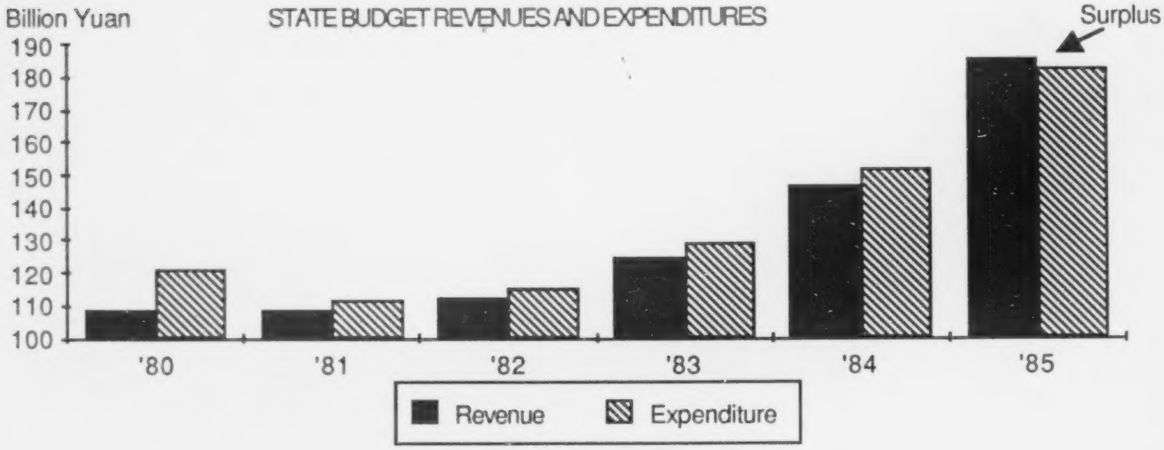
### TRENDS

Although the appearance of what some have called "radical" reforms in enterprise finance are the most exotic developments in China's financial sectors, probably the most fundamental trend is the on-going shift from China's traditional heavy policy dependence on fiscal measures to a balanced reliance on both fiscal and monetary tools to influence the macroeconomy. The state budget is balanced and growing more rapidly than the economy itself, largely as a result of rapid growth in enterprise tax revenues, in turn reflecting the improved financial health of the enterprises themselves. The structure of expenditures shows a clear and surprisingly rapid shift in the direction of reduced direct budgetary influences on national investment levels, with expenditure patterns changing more in the direction of patterns typical for market-oriented economies. At the same time, subsidies have been made explicit and have begun to appear on the expenditure side of the budget, although the 1986 budget anticipates an unexpected, and in one sense camouflaged, increase in total subsidies. Finally, movements in the money supply have begun to exhibit a close relationship with shifts in industrial growth rates, and it is increasingly apparent that manipulation of credit and interest rates has become an important policy mechanism.

Diagram 6-1



The most intriguing trends in early 1986 have been the announcement of on-going experiments with the leasing of enterprises to individual managers and their backers in a "management responsibility" system reminiscent of the earliest accounts of the farm household responsbility system, which eventually revolutionized China's rural economy. Although it is too early to evaluate the reports, the scale of the experiments indicates a serious consideration of divestiture of industrial assets to semi-private control. These experiments are enhanced by the appearance of negotiable bonds and securities for both state and cooperative enterprises, especially in the South, but also in the Northeast, where the leasing experiments are most publicized. News of these experiments adds significance to trends in more established financial dimensions which appear to support the enterprise reforms very strongly. The paragraphs below concentrate on these more traditional developments.

Table 6-1
STATE BUDGET 1977-1985

| | (Billion Yuan) | | | (Percent Growth) | |
|---|---|---|---|---|---|
| Year | Revenue | Expenditure | Surplus or Deficit(-) | Revenue | Expenditure |
| 1977 | 87.45 | 84.35 | 3.10 | n/a | n/a |
| 1978 | 112.11 | 111.09 | 1.02 | 28.2 | 31.7 |
| 1979 | 110.33 | 127.39 | -17.06 | -1.6 | 14.7 |
| 1980 | 108.52 | 121.27 | -12.75 | -1.6 | -4.8 |
| 1981 | 108.95 | 111.50 | -2.55 | .4 | -8.1 |
| 1982 | 112.40 | 115.33 | -2.93 | 3.2 | 3.4 |
| 1983 | 124.90 | 129.25 | -4.35 | 11.1 | 12.1 |
| 1984 | 146.50 | 151.50 | -5.00 | 17.3 | 17.2 |
| 1985 | 185.41 | 182.59 | 2.82 | 26.6 | 20.5 |
| 1986 * | 214.15 | 214.15 | 0.00 | 15.5 | 17.3 |

*NOTE: Estimates announced by State Minister of Finance, Wang Bingqian, 26 March 1986.
SOURCES: Official data from the State Statistical Bureau, communiques, and Ministry of Finance official speeches. (J5BQ01.T5E)

Summary budget statistics are given in Table 6-1, above. Growth of both revenues and expenditures in 1985 is particularly impressive. 1985 revenues exceeded the planned level by 20 percent, while expenditures were 16 percent more than budgeted, resulting in the first budget surplus since 1978. For 1986, the budget anticipates continued rapid growth of roughly 30 billion yuan for both revenue and expenditures, even though industrial growth and hence enterprise profits are likely to be lower than in 1985.

Table 6-1 is useful also for reviewing the 1979-81 fiscal crisis which had such a significant impact on economic growth and policy in the very early 1980s. The crisis can be viewed in two dimensions. First, revenues actually declined after 1978 and did not start to recover until 1982. Second, expenditures continued to grow through 1979, before declining somewhat in 1980 and even more sharply in 1981. This budget cutback in 1981 reestablished a basic balance, but the resulting reduction in state investment levels sent heavy industry into a decline which has generally been misinterpreted as a deliberate "readjustment" of the economy.

The 1979-81 crisis is useful as a contrast to the 1985-86 slow-down and recovery, in which state investment was again cut, but only briefly, and in which reduction of the money supply through bank lending cutbacks played a more important role. (For a discussion of the 1985 state investment adjustment, see Chapter 5.)

Table 6-2, below, gives details of the actual 1985 and anticipated 1986 budgets. In general, shifts in definitions make historical comparisons difficult at this level of detail. For example, the most important category for budgetary revenues in 1985-86, taxes, was of minor significance only a few years ago, when the bulk of revenues came from all enterprise profits, which were remitted directly to the state.

On the expenditure side, China's gradual shift to a market-oriented economy is shown in reduced state investment and increased state expenditures on education and other public services considered normal for governments in the West. 1986 budget expenditure increases are specified for agriculture, education, health, and national defense, but 1986 outlays for capital construction are actually expected to decline, and investments in technical transformation (upgrading of existing plant capacity) promise a sharp drop. State investment is perhaps the single most characteristic attribute of any economy considered centrally planned or "socialist." To the degree that China's public finance is allowing the investment initiative to shift over to a more decentralized decision-making process, China's economy is undergoing a fundamental transition.

An additional traditional feature of China's economy has been subsidies for enterprises running at a loss and subsidies to keep the urban cost of living low. These subsidies appear to be increasing, and are also becoming more visible, as budget presentations make them more explicit and shift them over to the expenditure side, rather than leaving them as negative revenues, the tradition inherited from Maoist China.

Although subsidies were reported as a single negative revenue item before 1986, they actually consisted of two types of payments: production enterprise loss subsidies, and price subsidies. Price subsidies are those that the state pays indirectly to workers to offset the cost of staples such as grain, edible oil, coal, and leather products. These subsidies take the form of payments to commercial units, permitting them to sell their products more at a lower price. Enterprise loss subsidies are those that the state provides to production enterprises in certain industries, such as coal, to keep the prices of their products at an affordable, and hence artificially low, level.

Table 6-2
STATE BUDGET REVENUES AND EXPENDITURES BY TYPE
1985-86
(billion yuan and percent of total)

| Item | 1985 billion yuan | 1985 percent of total | 1986 (forecast) billion yuan | 1986 (forecast) percent of total |
|---|---|---|---|---|
| REVENUES | 185.41 | 100.0 | 214.15 | 100.0 |
| Taxes | 201.08 | 108.5 | 205.65 | 96.0 |
| Energy/Transport | 14.27 | 7.7 | 15.00 | 7.0 |
| Treasury Bonds | 6.04 | 3.3 | 6.00 | 2.8 |
| Foreign Loans | 2.50 | 1.3 | 5.50 | 2.6 |
| Subsidies | -48.03 | -25.9 | -27.62 | -12.9 |
| Other | 9.54 | 5.1 | 9.62 | 4.5 |
| EXPENDITURES | 182.59 | 100.0 | 214.15 | 100.0 |
| Capital Construction | 56.97 | 31.2 | 56.78 | 26.5 |
| Technical Transform | 10.05 | 5.5 | 6.24 | 2.9 |
| Agriculture | 10.16 | 5.6 | 11.79 | 5.5 |
| Education, Health | 31.72 | 17.4 | 35.70 | 16.7 |
| National Defense | 19.15 | 10.5 | 20.02 | 9.3 |
| Administration | 13.30 | 7.3 | 14.38 | 6.7 |
| Domestic Debt Service | .00 | .0 | 1.15 | .5 |
| Foreign Debt Service | 3.26 | 1.8 | 4.10 | 1.9 |
| General Reserve | .00 | .0 | 3.00 | 1.4 |
| Subsidies | .00 | .0 | 27.72 | 12.9 |
| Unspecified | 38.00 | 20.8 | 33.28 | 15.5 |

SOURCES: State Finance Minister's 3/26/86 speech (J6BCF02S.T6F).
**Beijing Review**, 5/19/86, pp. V-X.

For 1986, the Ministry of Finance announced that for the first time, price subsidies would be reported as expenditures rather than as negative revenues. Enterprise loss subsidies, however, remained as negative revenue items. This reporting change yields an artificial book-keeping increase in both state revenues and expenditures of more than 20 billion yuan (see Table 6-2) while camouflaging the fact that total 1986 subsidies are actually expected to rise, from 48 billion yuan in 1985 to 55 billion yuan in 1986.

A more important trend with respect to state subsidies is not that they are expected to increase in 1986, but that there is now to be a public report on the size of subsidies in the two major categories. The degree to which these subsidies can be reduced in the future will be an important indication of the success of enterprise management and price reforms.

Table 6-3
MONTHLY GROWTH OF TOTAL INDUSTRIAL OUTPUT
June 1985 through April 1986
(Percent growth over same month of previous year)

| Year/Month | | Percent Growth<br>Official Rate | Seasonally Adjusted Rate |
|---|---|---|---|
| 1985 | Jun | 22.9 | 9.4 |
| | Jul | 20.2 | 6.5 |
| | Aug | 17.4 | .4 |
| | Sep | 14.5 | -6.6 |
| | Oct | 11.7 | -12.4 |
| | Nov | 8.8 | -28.4 |
| | Dec | 10.2 | 9.7 |
| 1986 | Jan | 5.6 | 36.5 |
| | Feb | .9 | -2.8 |
| | Mar | 6.0 | 19.1 |
| | Apr | 3.9 | 16.5 |

SOURCES: Monthly data from **China Economic News**, Hong Kong, various issues and State Statistical Bureau, **Monthly Statistical Bulletin**, Peking, various issues. Seasonally adjusted growth rates are Rock Creek Research calculations.

A final important element in China's recent financial trends is the money supply's growth pattern. Although many factors conntributed to the recent pattern of surge, slowdown, and recovery, changes in the money supply are probably the most significant visible causal factor. Data on the 1985-86 industrial slow-down and recovery are given in Table 6-3, above. (For more complete coverage of China's recent industrial trends, see Chapter 3, above.) From November 1984 to September 1985, China's industrial output increased by 17 to 25 percent every month, as measured over output in the same month of the previous year. During this same period, China's money supply grew rapidly, with 55 percent growth in 1984 and 54 percent growth in the first half of 1985. These money growth trends are detailed in Table 6-4, below. As industrial growth slowed in late 1985, however, fourth-quarter money supply growth declined to 17 percent over the fourth quarter level in 1984.

The rapid rate of money supply growth for 1984 and the first half of 1985, shared evenly between currency and enterprise deposits, was a significant acceleration from the 19 percent growth of 1983 and the 8 percent growth of 1982. It was reminiscent of the roughly 25 percent rates of money growth in 1979-80, the years of China's most severe budget deficits. 1984's growth, however, was not the result of government borrowing to cover a deficit. Rather, it represents a very rapid increase in bank lending to enterprises. This difference in the source of money supply increases may help explain why the 1984 expansion resulted in real economic growth and not just inflation.

Table 6-4
MONEY SUPPLY GROWTH 1977-1985

| Year | (Billion Yuan) Total Money Supply | Of Which: Currency | Currency Share (percent) | (Percent Growth) Money Supply | Currency |
|---|---|---|---|---|---|
| 1977 | 58.01 | 19.54 | 33.7 | n/a | n/a |
| 1978 | 58.04 | 21.20 | 36.5 | .1 | 8.5 |
| 1979 | 73.66 | 26.77 | 36.3 | 26.9 | 26.3 |
| 1980 | 91.93 | 34.62 | 37.7 | 24.8 | 29.3 |
| 1981 | 107.04 | 39.63 | 37.0 | 16.4 | 14.5 |
| 1982 | 115.70 | 43.91 | 38.0 | 8.1 | 10.8 |
| 1983 | 137.05 | 52.98 | 38.7 | 18.5 | 20.7 |
| 1984 | 212.59 | 79.21 | 37.3 | 55.1 | 49.5 |
| 1985 | 248.32 | 98.78 | 39.8 | 16.8 | 24.7 |

SOURCES: Official State Statistical Bureau data and International Monetary Fund data (J5BQ03.T5J).

The reduction in the money supply growth rate for 1985 shows that financial authorities succeeded in reining in the alarming upsurge in the money supply in 1984 and in "soaking up" the excess currency that was issued toward the end of that year. This success was achieved by increasing bank interest rates and the rate paid to holders of state bonds issued to finance key projects, by releasing inventories of high priced goods and gold for sale, and by a host of other traditional money-control policies.

The causes and progress of 1984's money supply increases are particularly difficult to gauge because of the seasonality of Chinese monetary flows. In general, growth of loans and money supply is very low and even negative in the first half of the year, with all of the year's growth coming in the second half, and in some cases all in the fourth quarter. This is perhaps best illustrated by available 1982 data on the growth of total bank loans by quarter, shown in Table 6-5 below.

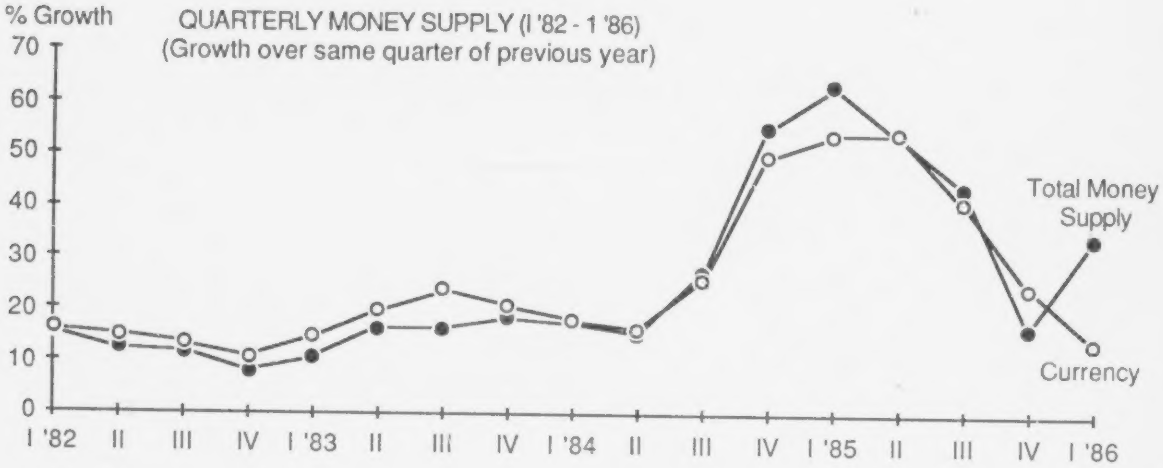
Table 6-5
SEASONALITY IN TOTAL LOANS, 1982

| | IV'81 | I'82 | II'82 | III'82 | IV'82 |
|---|---|---|---|---|---|
| Loans (Billion Yuan) | 277 | 266 | 268 | 277 | 305 |
| (Percent Over Previous Quarter) | n/a | -3.7 | .7 | 3.2 | 10.3 |

SOURCES: Official data, People's Bank of China.

In 1982, which in many ways was as "normal" a year as there has been in the past five to choose from, the total of loans outstanding only recovered to the level of the previous year by the third quarter. That is, there was no growth from the end of the fourth quarter 1981 to the end of the third quarter 1982. All of the growth in loans outstanding for 1982 occurred in the fourth quarter: October, November, and December. In his March 1985 speech before the Party Congress, Premier Zhao complained that 48 percent of the 1984 loan increase occurred in December. But when we consider the seasonality illustrated above, and remember how important December is for meeting quotas and concluding state procurements, 48 percent may not be very far out of the ordinary at all, even if it is a little high. It certainly is not as high as it was made out to sound in Zhao's speech, where no mention at all was made of seasonality. The importance of seasonality is further illustrated by quarterly data on the money supply, which go back to 1980 and are presented in Table 6-6 below.

Diagram 6-2



The money supply growth rates in columns 4 and 5 of Table 6-6 are calculated over the previous quarter and show that in virtually every year the money supply falls in the first two quarters, grows moderately in the third quarter, and then grows very fast in the fourth quarter, only to fall back again in the first quarter of the following year as the pattern begins again. This pattern is even more exaggerated for the currency portion of the money supply. On a quarter-to-quarter basis, then, it is not unusual for most of the money supply growth to come in the second half of the year, as reported by Zhao for the late 1984 upsurge.

An important part of Table 6-6, however, shows data for the third quarter of 1984, when the pattern of moderate growth was broken. On a quarter-to-quarter basis, the money supply grew 16 percent instead of the usual 5 or 6 percent. On an annual basis, money growth was 27 percent, rather than the 11-18 percent of the previous several years. This, then, is when China's "overheated" money supply growth really began, in the third quarter of 1984, not at the end of the year, and certainly not as late as December. It is not surprising that monthly industrial output data also show acceleration in industrial growth beginning in July of 1984, coinciding with the increase in the money supply. (For details of China's monthly industrial growth, see Chapter 3, Industry.)

Table 6-6
QUARTERLY MONEY SUPPLY 1981-1986

| Year/Qtr | | Amount (Billion Yuan) | | | Growth Over Previous Quarter (Percent) | | Growth Over Same Quarter, Previous Year (Percent) | |
|---|---|---|---|---|---|---|---|---|
| | | Total Money Supply | Of Which: Currency | Currency Share (percent) | Total Money Supply | Of Which: Currency | Total Money Supply | Of Which: Currency |
| 1980 | IV | 91.93 | 34.62 | 37.7 | n/a | n/a | n/a | n/a |
| 1981 | I | 88.31 | 32.56 | 36.9 | -3.9 | -6.0 | n/a | n/a |
| | II | 86.83 | 30.64 | 35.3 | -1.7 | -5.9 | n/a | n/a |
| | III | 92.12 | 33.32 | 36.2 | 6.1 | 8.7 | n/a | n/a |
| | IV | 107.04 | 39.63 | 37.0 | 16.2 | 18.9 | 16.4 | 14.5 |
| 1982 | I | 102.14 | 37.79 | 37.0 | -4.6 | -4.6 | 15.7 | 16.1 |
| | II | 97.56 | 35.25 | 36.1 | -4.5 | -6.7 | 12.4 | 15.0 |
| | III | 102.95 | 37.74 | 36.7 | 5.5 | 7.1 | 11.8 | 13.3 |
| | IV | 115.70 | 43.91 | 38.0 | 12.4 | 16.3 | 8.1 | 10.8 |
| 1983 | I | 113.13 | 43.33 | 38.3 | -2.2 | -1.3 | 10.8 | 14.7 |
| | II | 113.52 | 42.20 | 37.2 | .3 | -2.6 | 16.4 | 19.7 |
| | III | 119.73 | 46.73 | 39.0 | 5.5 | 10.7 | 16.3 | 23.8 |
| | IV | 137.05 | 52.98 | 38.7 | 14.5 | 13.4 | 18.5 | 20.7 |
| 1984 | I | 132.82 | 51.12 | 38.5 | -3.1 | -3.5 | 17.4 | 18.0 |
| | II | 131.01 | 49.10 | 37.5 | -1.4 | -4.0 | 15.4 | 16.4 |
| | III | 152.10 | 58.72 | 38.6 | 16.1 | 19.6 | 27.0 | 25.7 |
| | IV | 212.59 | 79.21 | 37.3 | 39.8 | 34.9 | 55.1 | 49.5 |
| 1985 | I | 216.96 | 78.76 | 36.3 | 2.1 | -.6 | 63.3 | 54.1 |
| | II | 201.24 | 75.75 | 37.6 | -7.2 | -3.8 | 53.6 | 54.3 |
| | III | 218.29 | 82.71 | 37.9 | 8.5 | 9.2 | 43.5 | 43.3 |
| | IV | 248.32 | 98.78 | 39.8 | 13.8 | 19.4 | 16.8 | 24.7 |
| 1986 | I | 291.03 | 89.88 | 30.9 | 17.2 | -9.0 | 34.1 | 14.1 |

SOURCES: Official State Statistical Bureau data and International Monetary Fund data. (J5BQ05.T6A)

In sum, movements in China's money supply appear to have had as significant an influence on China's economy as budgetary shifts, especially in recent years and months. These developments, which are still on-going, imply that tools of economic analysis usually reserved for market economies are becoming useful for China as well.

## POLICY

China's financial policies, as expressed in official statements and documents, and as revealed by evolving reforms, have two major elements. First, they are restructuring the fiscal and banking systems to make them more compatible with China's new profit incentives and competitive economic environment. Second, both budgetary policy and monetary policy are increasingly used to control the overall macroeconomy by stimulating it during times of slowdown and cooling it off in times of rapid growth. Both broad policy elements have numerous dimensions, all of which reflect the degree to which reforms have pervaded China's overall economic system.

China's fiscal adaptation to industrial reforms is clearly seen in the evolution of the budget, reviewed above. In particular, the investment role of the state budget has been stabilized for 1986, with essentially no anticipated growth in outlays, while non-budgetary investments are expected to continue to grow rapidly. Furthermore, of those investments financed from the budget, an increasing share is to be dispersed in the form of interest-bearing loans rather than grants. Minister of Finance Wang Bingqian announced as part of his 1986 budget presentation that 38 out of 58 billion yuan in investment funds would be allocated in the form of loans.

In addition to this shift, the state budget for 1986 is also applying "guidance planning" to the remaining state investments. In particular, use of state funds for investments in housing and in "processing industries" is being discouraged in favor of investment in transportation and critical heavy industrial sectors, such as steel, energy, and chemicals, which are financially not as able to benefit quickly from reform incentives because of China's price system. In general, the state budget expenditure pattern accelerates enterprise independence. This policy emphasis is also promoted by the explicit presentation of subsidy levels in budget reports and policy statements emphasizing the need to reduce subsidies of all kinds.

The same over-arching policy of accomodation to reforms is clear on the revenue side of the budget as well. Taxes have virtually replaced revenue remittances, and tax rates are being adjusted for individual enterprises as compensation for their dependence on China's still-irrational price system. In addition, experimental tax forms have appeared in the budget, most notably a value-added tax.

China's banks and banking system are promoting an even more experimental accomodation with reforms than the state budget is. In contrast to its traditional role of disbursing state funds and monitoring their use, China's banking system is increasingly acting as a financial intermediary between those with savings and those wanting to borrow. China's highest banking official, head of the People's Bank of China Chen Muhua, has stated clearly that China's overall policy is to move away from state planning towards emphasis on policy guidelines, interest rates, and capital markets.

The increased official effort to raise funds for banks is adding many elements of Western and Japanese banking practices to China's system. A growing number of banks are permitted to take savings deposits; interest rates for savings deposits are being raised; and limited experiments have been undertaken with a postal savings system under which post offices act as savings bank branches. Perhaps even more fundamental is the policy of experimental inter-bank loans at the branch level to balance local supply and demand for money. Without the reforms, Chinese banks with excess loan demand have no recourse but to request additional funds from their own parent banks, a bureaucratic process which is time-consuming and often brings few results. Under the reform system, which is in experimental stages in south China, bank branches can borrow the needed money at negotiated interest rates from other bank branches.

This same market-oriented flexibility is apparent in the experimental circulation of interest-bearing bonds and securities, in some cases with equity shares. In some experiments the bonds and shares are negotiable and can be sold to third parties without the permission of government authorities.

Chen Muhua has qualified these policies as experimental only, but has also stated that China's long-term financial policy goal is to have strong domestic capital markets with a full range of discount and rediscount financial trading activities.

All of these policy positions and reforms reinforce the conformity of fiscal and monetary policy to China's overall economic and enterprise management reforms. A second policy direction is the use of the budget and banking system to control the overall economy's actual rate of growth. After early 1985, when the economy was clearly overheated, mid-1985 contraction of the money supply was more severe than usual, helping to limit inflation and cut excess demand for investment goods. In August and September state investment projects were cut or postponed, and in October investment bank loans were suddenly contracted. The money supply growth was slowed significantly and the industrial growth rate slowed in response.

Conversely, by early in 1986 state investment flows had begun again and the money supply growth had recovered, restimulating growth. It is difficult to say how carefully these policy steps are planned and carried out, and in many ways the investment cutbacks have the same effect they did in 1980-81: arbitrary across-the-board cut-backs with little or no concern for the efficacy of individual investment projects. Regardless of whether China's policies for macroeconomic control have made much of a transition from a clumsy fiscal mode to a more sophisticated financial and market-oriented mode, they represent a major break from China's centrally-planned past, when output growth was largely controlled in physical terms through the state plan.

## PROBLEMS

China's fiscal and banking problems may be most serious at the macroeconomic level, while various technical problems are more manageable. The macroeconomic difficulties can be defined by two separate but related categories: management of growth in the economy when industrial prices are poorly aligned with actual scarcity values, and effective money supply control when so much of the money supply, and in particular the currency portion, has been built up in a time of rationing and price controls and hence is far in excess of available consumer and investment goods supplies.

The greatest difficulty facing China's fiscal policy-makers is management of overall economic growth without a simple method for determining the worth of micro-level investment decisions. Bureaucratic methods for making these choices, such as emphasizing the energy, transport, metals, and chemicals sectors, are too crude. They do not discriminate between good and bad projects within and without these large categories, and as a result, across-the-board cuts or increases in investment spending often damage good projects and encourage bad ones. A more sophisticated control mechanism, influence over interest rates, would affect all projects with marginal profitability. But China's price system is still largely unreformed. Profitability is not necessarily an indication of the worth of an operation, and China will need to struggle with the cruder controls of budget expenditures -- mainly for investment and subsidies -- in order to manage total demand.

China's second major financial problem is controlling the effective money supply when so much of it is outside the banks and when its growth in previous years came in an environment within; which demand was controlled by ration coupons and limited goods availability, rather than by prices. In other words, there is no reason to believe that three major interrelated components of China's economy -- the money supply, goods availability, and prices -- are in any kind of balance at all. As a result, increased sophistication of financial intermediation and increasingly loose control over various markets will naturally result in inflation difficult to discipline with any other than the crudest macroeconomic policy tools.

The degree to which the money supply is out of banking hands is reflected in the admission by Minister of Finance Wang Bingqian that 22 percent of enterprise transactions are conducted in cash, compared with the 7-percent norm for the United States and Japan. Although this comparison with far more sophisticated economies certainly exaggerates China's overemphasis on cash transactions, the virtual absence of personal demand deposits (checking accounts) and the large stock of personal savings in and out of banks all add to the degree to which China's money supply, large in relation to goods availability, will be difficult for financial authorities to control.

Although the two problems of managing economic growth and controlling the money supply are policy-makers' greatest challenges, more specific problems also deserve attention. In particular, mid-1985 wage reforms apparently raised costs for many industrial enterprises and exacerbated subsidy needs from the state budget. Minister of Finance Wang Bingqian specifically raised this problem as one requiring adjustment. A second problem is more familiar and involves the control of investment outside the state plan as the economy recovers and as industrial growth gathers momentum in late 1986 and early 1987.

Finally, corruption and tax evasion are recent problems difficult for poor-country administrations to deal with. There are numerous accounts of serious tax evasion in China, many resulting from the close relationship between local political leaders and the heads of industrial enterprises. Enterprises have been falsely put in a lower enterprise category to avoid higher taxes, and in the most extreme case, some provinces have refused to remit some taxes, such as the bonus tax.

Sichuan, whose population of 100 million people makes it China's most populous province, is one such province which has refused to pay taxes. The next two most populous provinces, Henan and Shandong, both remitted substantially less bonus tax per capita than the national average. Loopholes in tax collection methods are also part of the tax evasion problem. In Hebei province, unpaid taxes totaled over 200 million yuan from 1980 to 1984. Provincial officials have stated that tax evasion has affected state revenue, hindered the modernization program, and corrupted Party style and cadres. Although problems of tax evasion are common in the Chinese press, so are reports of success in correcting abuses. The importance of the issue is probably greater as a sign of tension between Peking and localities than as a serious immediate cause of revenue failure.

## PROSPECTS

China's fiscal and monetary prospects suggest continued growth of state budget revenues at a rate lower than in 1985 and resurgent expansion of the money supply after the 1985-86 winter slowdown. In general, both the budget and the banking system will continue to implement market-oriented reforms and experiment with more decentralized arrangements for financial intermediation. Leadership in both the Ministry of Finance and the People's Bank of China appears strongly in support of the reform movement, even what some have called the "radical" reform movement, which is to say the development of capital markets and increased independence for industrial enterprise managers.

Past draft budgets have not been accurate guides to actual revenue levels, but the general health of the economy and in particular the recovery of industrial growth rates after the late-1985 deceleration mean that growth of state budget revenues in 1986 will again be high, although probably not as high as in 1985. The source of the revenue increase will be enterprise taxes, as enterprise profitability continues to improve. The most significant uncertainty in the 1986 budget is the level of subsidies needed for enterprises running losses and for price supports as farm prices continue to adjust. If there is a significant harvest recovery from the 1985 decline, which seems likely, state outlays for crop purchases could again be high, given the higher procurement prices generally contracted this year. In short, if revenues do grow more slowly in 1986 than in 1985, and if subsidies and farm outlays are as large as expected, the state budget could slip into deficit for the year. This would not be a sign of any chronic imbalance, because the deficit would not be large and would be caused by transitional factors.

In the banking sector, money supply is likely to continue to grow at the new higher rate recorded for the first quarter of 1986, and the various financial instruments appearing throughout the country will continue to proliferate. With no major consumer price reforms scheduled for 1986, the banking authorities apparently feel that there is less risk of visible, high inflation, making it easier to promote both growth and price reform with easier credit.

1986-87 will also see the continuation of banking reforms giving more autonomy to bank branches, allowing them to operate more freely in a financial market environment, and making it easier for them to raise funds both from private depositors and through interbank channels. The uncertainty is not the direction of the reforms and the evolution of the banking system, but rather the speed with which new instruments and institutional freedoms are introduced. The pace of reform and experimentation in early 1986 has already been much more rapid than expected, in spite of the fact that 1986 was meant to be a period of relaxation from the 1984-85 pace.

In short, prospects in state finance and banking promise more of the reform-oriented progress so evident in 1984-86. Official policy statements, current developments, and the manageability of existing problems give no reason to expect anything other than an increasingly sophisticated and healthy financial picture for some time to come.

# CHAPTER SEVEN -- Trade and Payments

## EXECUTIVE SUMMARY

**TRENDS**

- After four years of trade surpluses and reserve accumulation, China's 1985 imports surged while exports stagnated.
- China's 1985 trade deficit was 9.98 billion dollars, due to import growth of almost 50%.
- The import surge is concentrated in investment goods and is closely related to the introduction of urban reforms.
- The deficit with Japan is three-fourths of the total deficit and is concentrated in markets with strong prospects.
- Sharp declines in world oil prices have cut China's export earnings.
- Foreign exchange reserves fell 2.5 billion dollars in 1985, and a further 1.6 billion in the first quarter of 1986.

**POLICY**

- By March 1985 China cut consumer imports dramatically, but vowed to honor all investment good import contracts.
- To deal with sagging exports, China has begun a gradual devaluation of the yuan and recentralized some controls.
- China's overall strategy is to use its limited foreign reserves to import technology and critically short materials.
- China has become more innovative in its approach to export financing, and has shown a willingness to compete with Third World countries.
- Borrowing to finance imports appears to be widely accepted, and is likely to increase.

**PROBLEMS**

- Sharp declines in world oil prices have cut China's export earnings.
- China's major trade problem is one of internal discipline as managerial decentralization and price responsiveness spread.
- High "luxury" pricing for domestic manufactures and an overvalued currency have made exporting unattractive.
- A rapid drawdown of foreign exchange reserves has increased international skepticism about China's ability to maintain high levels of foreign trade.

**PROSPECTS**

- The current devaluation will continue until the yuan is 3.5 or 4.0 to the dollar some time in 1986.
- Given continued high levels of imports in 1986, China will borrow heavily, in an attempt to hold foreign exchange reserves at politically tenable levels.

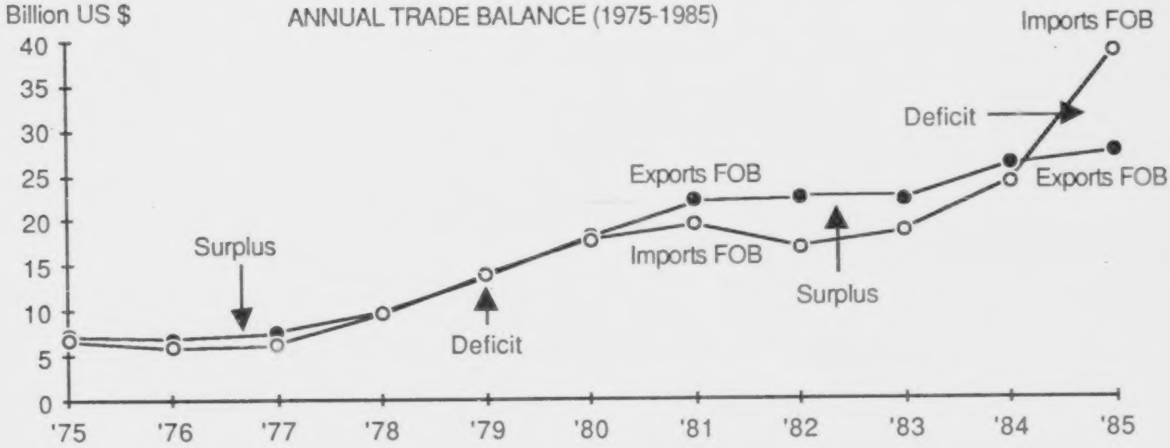
**TRENDS**

Table 7-1
CHINA'S FOB TRADE BALANCE, 1975-1985
(Billion US $)

| | Exports FOB | Imports CIF | FOB-CIF Trade Balance | Exports FOB | Imports FOB | FOB Trade Balance |
|---|---|---|---|---|---|---|
| 1975 | 7.26 | 7.49 | -.23 | 7.26 | 6.67 | .59 |
| 1976 | 6.86 | 6.58 | .28 | 6.86 | 5.86 | 1.00 |
| 1977 | 7.59 | 7.21 | .38 | 7.59 | 6.34 | 1.25 |
| 1978 | 9.75 | 10.89 | -1.14 | 9.75 | 9.58 | .17 |
| 1979 | 13.66 | 15.67 | -2.01 | 13.66 | 13.95 | -.29 |
| 1980 | 18.10 | 19.94 | -1.85 | 18.10 | 17.75 | .35 |
| 1981 | 22.01 | 22.01 | .00 | 22.01 | 19.37 | 2.63 |
| 1982 | 22.39 | 19.31 | 3.08 | 22.39 | 16.89 | 5.50 |
| 1983 | 22.23 | 21.39 | .83 | 22.23 | 18.72 | 3.51 |
| 1984 | 25.97 | 27.42 | -1.45 | 25.97 | 24.07 | 1.90 |
| 1985 | 27.42 | 42.74 | -15.33 | 27.42 | 37.40 | -9.98 |

Sources: 1975-1980 from Ministry of Foreign Trade, 1980-1982 and 1985 on Official Chinese customs basis, 1982-1984 on official payments basis. (J6bcx71t.c6f, DT).

Diagram 7-1



As a result of the open-door policy following Mao's death, China's foreign trade turnover has more than quadrupled between 1975 and 1985. China's self-imposed commercial isolation is apparently over. The trade pattern during this period of rapid growth has not been even. The trade balances in Table 7-1 show a deficit in 1979, strong surpluses in 1982-83, and the appearance of a very large deficit in 1985. The more recent trade deficit is a result of rapidly growing imports of investment goods while exports in general have stagnated. The import boom beginning in late 1984 has mostly benefitted Japan, which, in addition to substantial steel exports to China, has out-competed the United States and West Germany for China's large and growing purchases of machinery, electronic equipment and vehicles. Japan's dominance, however, may have reached a high point during late 1985; the U.S., EEC, and the Soviet Union have all registered gains in early 1986 while Sino-Japanese trade has declined. Trade developments are also closely related to China's foreign exchange system. 1985 saw both a dramatic fall in foreign exchange reserves and China's first currency devaluation in five years in the third quarter. In addition, reports indicate that borrowing was high in 1985.

Table 7-2
CHINA'S BALANCE OF PAYMENTS
(Million US $)

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| CURRENT ACCOUNT | | | | | | |
| Commodity Trade Exports (FOB) | 18099 | 22007 | 21125 | 20707 | 23905 | 27418 |
| Commodity Trade Imports (CIF) (-) | -19944 | -22014 | -19293 | -21390 | -26744 | -40149 |
| CIF/FOB Conversion Ratio | .89 | .88 | .87 | .88 | .87 | .88 |
| Commodity Trade Imports (FOB) (-) | -17750 | -19372 | -16876 | -18717 | -23891 | -37402 |
| Commodity Trade Balance | 349 | 2635 | 4249 | 1990 | 14 | -9984 |
| Services Income | 2409 | 3130 | 3604 | 4028 | 4819 | |
| Services Expenses (-) | -2703 | -3333 | -2665 | -2289 | -3245 | |
| Total Net Services | -294 | -203 | 939 | 1739 | 1574 | |
| Net Private Transfer Receipts | 640 | 464 | 530 | 436 | 305 | |
| Net Government Transfer Receipts | -70 | 108 | -44 | 75 | 137 | |
| Total Net Transfer Receipts | 570 | 572 | 486 | 511 | 442 | |
| Invisibles Receipts (NET) | 276 | 369 | 1425 | 2250 | 2016 | 3490 |
| Current Account Balance | 625 | 3004 | 5674 | 4240 | 2030 | -6494 |
| CAPITAL ACCOUNT | | | | | | |
| Long-term Lending | 956 | 1736 | 2923 | 2653 | 4241 | |
| Long-term Borrowing (-) | -2716 | -1987 | -3312 | -2702 | -4128 | |
| Long-Term Lending (Net) | -1760 | -251 | -389 | -49 | 113 | |
| Short-term Lending | 236 | 1190 | 295 | 334 | 1113 | |
| Short-term Borrowing (-) | -312 | -231 | -244 | -59 | -223 | |
| Short-Term Lending (Net) | -76 | 959 | 51 | 275 | 890 | |
| Total Lending (Net) | -1836 | 708 | -338 | 226 | 1003 | -2711 |
| Increase in Reserves | 108 | 2511 | 6291 | 3648 | 95 | -2507 |
| Capital Account Balance | -1728 | 3219 | 5953 | 3874 | 1098 | -6494 |
| Errors and Omissions (Calc) | 2353 | -215 | -279 | 366 | 932 | 0 |
| FOREIGN EXCHANGE RESERVES (Official) | 1875 | 4386 | 10677 | 14325 | 14420 | 11913 |
| (IMF) | 2262 | 4783 | 11135 | 14476 | 16705 | 11913 |

* NOTE: Foreign Exchange Reserves prior to 1984 are calculated backwards based on official change in reserves published for 1982-1984.
SOURCES: Official data, (1982-1984), IMF estimates, RCR estimates.
(J6bcx72t.c6f, dt)

### Table 7-3
### SUMMARY QUARTERLY BALANCE OF PAYMENTS FOR CHINA, 1984-86'I
(Million US $)

| | 1984'IV | 1985'I | 1985'II | 1985'III | 1985'IV | 1986'I |
|---|---|---|---|---|---|---|
| CURRENT ACCOUNT | | | | | | |
| Commodity Trade Exports | 7103 | 5702 | 6262 | 6793 | 8661 | 5840 |
| Commodity Trade Imports (-) | -7959 | -7525 | -8859 | -9253 | -11765 | -7674 |
| Commodity Trade Balance | -856 | -1824 | -2596 | -2459 | -3104 | -1834 |
| Invisibles Receipts (NET) | 650 | 800 | 840 | 900 | 950 | 1160 |
| Current Account Balance | -206 | -1024 | -1756 | -1559 | -2154 | -674 |
| CAPITAL ACCOUNT | | | | | | |
| Total Lending (Net) | -237 | 2134 | -695 | -3297 | -1477 | 889 |
| Increase in Reserves | 31 | -3158 | -1061 | 1738 | -677 | -1563 |
| Capital Account Balance | -206 | -1024 | -1756 | -1559 | -2154 | -674 |
| Errors and Omissions (Calc) | 0 | 0 | 0 | 0 | 0 | 0 |
| FOREIGN EXCHANGE RESERVES | N/A | 11262 | 10852 | 12590 | 11913 | 10350 |
| FOREX FROM IFS | 16705 | 13660 | 13565 | 12592 | 11913 | N/A |

Sources: Commodity trade figures based on information released by Chinese Customs Administration; invisibles for 1985 are Rock Creek Research estimates based on reported year-end total, for 1986'I see China Daily (4/18/86); foreign exchange reserve figures based on reports from various sources. (j6bcx73t.c6f, dt).

Periods of commodity trade surplus in the early 1980s helped China build foreign exchange reserves up to a level of 14.4 billion dollars by the end of 1984. The sharp decline in 1985 brought them down to 11.9 billion dollars, a level covering only three months of imports at fourth quarter trade levels. Imports were cut back in the first quarter of 1986, but it is difficult to know whether this reflects an official desire to hold down import levels, or is merely in keeping with an historical trend which shows a seasonal dip in imports during the first two quarters of every year. For details on China's balance of payments see Tables 7-2 and 7-3, above.

The internal distribution of the reserves, with more in provincial hands, could explain reports of severe foreign exchange shortages in Peking. When foreign exchange reserves were quite high, as in 1983 and 1984, import policy was relatively open, and foreign exchange flowed more freely. Now that the supply of foreign exchange has tightened, the trend is towards more restricted access to foreign exchange. Reserve levels appear to have strengthened through the end of the third quarter of 1985 to 12.6 billion, after falling 3.6 billion in the first two quarters. End year and early 1986 figures show new declines, however, to 10.4 billion dollars.

Ownership of foreign exchange holdings (detailed in table 7-4, below) sheds some light on what may have been happening to China's foreign exchange reserves over the past several quarters. There has been a significant and continuing shift in ownership of reserves from State accounts to Bank of China

(BOC) accounts. So-called State-owned reserves declined precipitously from early 1985 to the present, from 68 percent of the total in March of 1985 to 25 percent in March of 1986. While the distinction between the two forms of holdings is not entirely clear, in general the State-held reserves appear to be linked to China's current account transactions (exports, imports, transfers and services) and the BOC holdings linked to capital account transactions (international lending, borrowing and direct investment). A further distinction seems to be that State reserves are allocated to and obtained from end-users through sales and purchases, while BOC holdings are allocated and returned as loans. This scissors pattern is significant because it reflects both China's strategy of borrowing to maintain reserves in the face of current account deficits and the growing power of China's banking system under Chen Mu-hua.

Table 7-4
OWNERSHIP OF FOREIGN EXCHANGE
(Million US Dollars)

| | State | Bank of China | Total |
|---|---|---|---|
| Jan 1985 | 7,375 | 5,400 | 12,775 |
| Feb | 7,506 | 4,824 | 12,330 |
| **Mar** | **7,682** | **3,580** | **11,262** |
| Apr | 7,177 | 4,328 | 11,505 |
| May | 6,276 | 4,901 | 11,177 |
| **Jun** | **5,370** | **5,482** | **10,852** |
| Jul | 4,452 | 7,505 | 11,957 |
| Aug | 3,844 | 7,616 | 11,460 |
| **Sep** | **3,377** | **9,215** | **12,592** |
| Oct | 3,050 | 9,180 | 12,230 |
| Nov | 2,160 | 10,590 | 12,750 |
| **Dec** | **2,640** | **9,260** | **11,900** |
| Jan 1986 | 3,013 | 8,133 | 11,146 |
| Feb | 2,859 | 8,281 | 11,140 |
| **Mar** | **2,555** | **7,793** | **10,348** |

SOURCES: Bank of China data reported in the **China Economic News**, various issues, and the **China Daily**, various issues; (j6bcx74t.c6f).

Historical data at the SITC 1-digit level of aggregation in Table 7-3 indicate major long-term trends in the makeup of China's growing commodity trade. Temporary increases of food and raw materials in 1980-81, (categories 1 and 3,) were associated with an increased need for grain and cotton due to very bad drought and flood conditions in China at that time. In contrast to the short term fluctuations, exports of mineral fuels and light manufactures, primarily crude oil and apparel, have grown consistently throughout the period, while imports of chemicals, metals and especially machinery have increased rapidly.

### Table 7-5
### ANNUAL TRADE BALANCE BY SITC ONE DIGIT TRADE CATEGORIES
(Million US Dollars)

| | (0) Food and Animals | (1) Beverages & Tobacco | (2) Crude Materials | (3) Mineral Fuels | (4) Oils & Fats | (5) Chemicals | (6) Materials & Metals | (7) Machinery & Transport | (8) Light Manufactures | (9) Other Commodities | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 784 | 59 | -13 | 1035 | 10 | -339 | -965 | -1605 | 799 | 3 | -230 |
| 1976 | 813 | 60 | 127 | 872 | 11 | -228 | -680 | -1560 | 848 | 20 | 280 |
| 1977 | 316 | 59 | -189 | 1076 | -106 | -441 | -678 | -735 | 1088 | -10 | 380 |
| 1978 | 362 | 57 | -401 | 1399 | -60 | -600 | -1759 | -1441 | 1310 | -8 | -1140 |
| 1979 | 113 | 63 | -511 | 2593 | -106 | -511 | -1827 | -3496 | 1727 | -55 | -2010 |
| 1980 | -537 | 35 | -1784 | 4274 | -106 | -514 | -552 | -4503 | 2500 | -91 | -1280 |
| 1981 | -685 | -149 | -2056 | 5012 | -13 | -1260 | 622 | -4693 | 3086 | -20 | -1280 |
| 1982 | -1267 | -35 | -1332 | 5029 | -30 | -1721 | 414 | -1881 | 3151 | 662 | 2989 |
| 1983 | -270 | 57 | -565 | 4542 | 35 | -1928 | -1910 | -2761 | 3012 | 621 | 833 |
| 1984 | 897 | -8 | -128 | 5832 | 62 | -2863 | -2273 | -5819 | 3478 | -626 | -1448 |
| 1985 | 2269 | -99 | -557 | 6965 | 13 | -3123 | -7568 | -15760 | 1585 | 950 | -15325 |

NOTE: Because of the lack of conversion standards at 1-digit SITC levels, imports in this table are CIF.

SOURCES: 1975-1980 data from RCR Trade Databank, corrected from partner country data in CIA **International Trade Statistics**, various editions. 1981-1985 balances from Chinese Customs Statistics, various editions. (J6bcx75t.c6f, dt).

Switching from annual to quarterly data, the major recent development is the very large deficit in commodity trade. Overall, China's 1985 FOB deficit was 9.98 billion dollars, in spite of consistent growth in exports throughout the year. As was the case for 1984, data for 1985 show that trade was dominated by oil and producer goods. The deficit with Japan continued to account for more than two-thirds of the total deficit, despite a slight fall in imports during the fourth quarter. Within Sino-Japanese trade, machinery and transport equipment account for much of the total shortfall. China's net imports from Japan far overshadow those from the United States. Furthermore, because they are concentrated in investment goods such as electrical machinery, vehicles and telecommunications, Japan's China-bound exports are expected to enjoy continued growth.

Official trade statistics for 1985 and the first quarter of 1986 reveal the rapid growth in China's trade deficit over the last year and a half. Quarterly data, presented in Table 7-6 below, emphasize a steady increase in the size of the deficit through the fourth quarter. The first quarter deficit was due more to weakening exports than growth in imports over end 1984. This led observers to believe that China was tightening control over imports after unruly late 1984 growth. However, as Table 7-6 clearly shows, the even larger trade deficit in second quarter 1985 was due solely to import growth of over a billion and a half dollars, while exports actually recovered. When imports held steady in the first quarter of 1985, rather than falling to match the usual first quarter dip in exports, and grew another 16 percent from first to second quarter, the result was a 6-month trade deficit of almost 5 billion dollars. Total trade exploded in the last two quarters of the year, growing at a rate of 6 and 27 percent in the third and fourth quarters, respectively. First quarter 1986 export results fit the pattern for first quarter trade in previous years, with exports dropping to a level somewhere between the first two quarters of the previous year. Imports, however, declined at a rate faster than normal, indicating that some import contracts, which had been guaranteed through end year 1985, were not renewed. China's quarterly trade pattern in Table 7-6, below, shows imports in both the official CIF form and the more accurate FOB form for balance of payments. (CIF imports double-count invisibles such as shipping and insurance, much of which China pays to itself.)

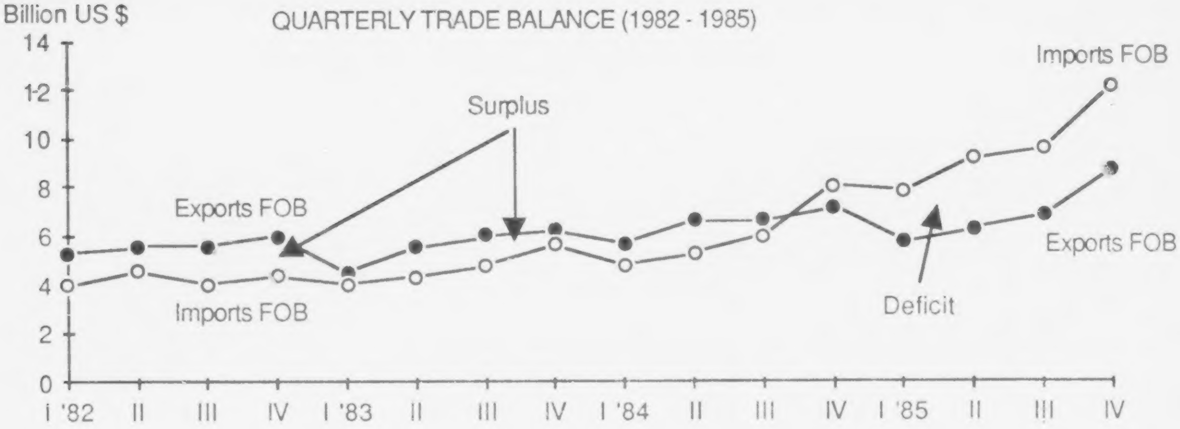
Table 7-6
QUARTERLY TRADE BALANCE, 1981-1985
(Billion US $)

| | | Fitted Dollar Exports FOB | Fitted Dollar Imports CIF | Trade Balance FOB/CIF | Fitted Dollar Exports FOB | Fitted Dollar Imports FOB | Trade Balance FOB/FOB |
|---|---|---|---|---|---|---|---|
| | | | (Billion US $) | | | (Billion US $) | |
| 1982 | I | 5.30 | 4.53 | .77 | 5.30 | 3.96 | 1.34 |
| | II | 5.55 | 5.22 | .33 | 5.55 | 4.57 | .99 |
| | III | 5.56 | 4.56 | 1.00 | 5.56 | 3.99 | 1.57 |
| | **IV** | **5.98** | **5.00** | **.98** | **5.98** | **4.37** | **1.61** |
| 1983 | I | 4.50 | 4.57 | -.07 | 4.50 | 4.00 | .51 |
| | II | 5.52 | 4.93 | .59 | 5.52 | 4.32 | 1.20 |
| | III | 5.99 | 5.48 | .51 | 5.99 | 4.80 | 1.19 |
| | **IV** | **6.21** | **6.40** | **-.20** | **6.21** | **5.60** | **.60** |
| 1984 | I | 5.69 | 5.43 | .26 | 5.69 | 4.80 | .89 |
| | II | 6.57 | 6.05 | .53 | 6.57 | 5.28 | 1.29 |
| | III | 6.60 | 6.79 | -.19 | 6.60 | 5.97 | .63 |
| | **IV** | **7.10** | **9.15** | **-2.05** | **7.10** | **8.01** | **-.91** |
| 1985 | I | 5.70 | 8.60 | -2.90 | 5.70 | 7.53 | -1.82 |
| | II | 6.26 | 10.12 | -3.86 | 6.26 | 8.86 | -2.60 |
| | III | 6.79 | 10.57 | -3.78 | 6.79 | 9.25 | -2.46 |
| | **IV** | **8.66** | **13.45** | **-4.78** | **8.66** | **11.76** | **-3.10** |
| 1986 | I | 5.84 | 8.77 | -2.93 | 5.84 | 7.67 | -1.83 |

SOURCES: Official Chinese Customs Statistics, various editions.
(J6bcx76t.c6f, dt)

China's import expansion remained very strong in investment goods through all four quarters of 1985. This growth closely parallels the progress of urban reforms, begun in late 1984 and implemented widely during the past year. In 1984, the import surge was concentrated in machinery and transportation equipment, SITC 7, and metals under SITC 6 (see Table 7-7, below). In 1985, heavy industry and investment goods continued to increase but there were also large-scale imports of consumer durables. For details on imports by commodity, see Table 7-8, below. Trade data by SITC one-digit level of classification in Table 7-7 show that the increase in producer good imports was so dramatic that net imports of both machinery and transport equipment (SITC 7) and materials and metals (SITC 6) in the fourth quarter of 1985 were greater than net imports for the last three quarters of 1984 combined. 1985 imports in the SITC 6 category were more than double the value of imports in the preceding year, while those in category 7 grew 171 percent over the same period. In contrast, net earnings from mineral fuel exports, mostly petroleum and traditionally China's greatest foreign exchange earner, hardly grew at all (19 percent).

Diagram 7-2



The slow growth in petroleum export earnings from early 1984 to end-year 1985, in spite of the nearly 35 percent increase in exports by weight, confirms China's strategy at that time of rapidly expanding fuel export volume to maintain earnings in the face of dramatically lower average prices. Early this year, however, China announced that export volumes of crude oil would not be increased over the 1985 total. This decision appears to reflect higher domestic opportunity costs for crude, given the steep decline in world oil prices in the first quarter of this year. (For more on this policy change please see chapter 4 on energy.) As for the remaining major foreign exchange earner, SITC Category 8 (Light Manufactures), net earnings, which had remained stable from 1981 to end year 1984, fell sharply in 1985. Chemical fertilizer imports, which had been a major expense in 1984 and early 1985, dropped significantly throughout the past year, largely in response to agricultural purchasing and price reforms. Within the largest net import category, SITC 7, electrical equipment of various sorts shares importance with vehicles and transport equipment. The rapid growth in the volume of imports of vehicles and equipment sets shown in table 7-8 corresponds to the increases in SITC 7 in Table 7-7.

### Table 7-7
### QUARTERLY SITC ONE DIGIT NET EXPORTS, 1981-1985
### (Million US Dollars)

| | | (0) Food and Animals | (1) Beverages & Tobacco | (2) Crude Materials | (3) Mineral Fuels | (4) Oils & Fats | (5) Chemicals | (6) Materials & Metals | (7) Machinery & Transport | (8) Light Manufactures | (9) Other Commodities | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1982** | **I** | **-131** | **-35** | **-346** | **1104** | **-16** | **-424** | **283** | **-418** | **653** | **82** | **751** |
| | II | -504 | -24 | -540 | 1335 | -8 | -488 | 209 | -582 | 836 | 91 | 325 |
| | III | -459 | 7 | -224 | 1288 | -11 | -387 | 117 | -441 | 819 | 253 | 962 |
| | IV | -175 | 16 | -221 | 1302 | 5 | -422 | -194 | -441 | 844 | 236 | 951 |
| **1983** | **I** | **-233** | **14** | **-145** | **1027** | **6** | **-517** | **-155** | **-682** | **603** | **15** | **-67** |
| | II | -281 | 11 | -21 | 1074 | 6 | -462 | -242 | -592 | 761 | 333 | 587 |
| | III | -15 | 16 | -124 | 1361 | 4 | -376 | -577 | -729 | 857 | 92 | 509 |
| | IV | 260 | 16 | -276 | 1079 | 19 | -573 | -935 | -758 | 791 | 181 | -197 |
| **1984** | **I** | **74** | **7** | **-54** | **1185** | **2** | **-599** | **-420** | **-761** | **811** | **12** | **257** |
| | II | 218 | 12 | 175 | 1525 | 22 | -662 | -318 | -1106 | 882 | -220 | 528 |
| | III | 244 | 10 | -28 | 1526 | 28 | -716 | -536 | -1330 | 908 | -294 | -188 |
| | IV | 360 | -36 | -221 | 1597 | 10 | -886 | -1000 | -2622 | 877 | -125 | -2045 |
| **1985** | **I** | **284** | **-19** | **-62** | **1634** | **-6** | **-874** | **-1487** | **-2930** | **336** | **226** | **-2897** |
| | II | 418 | -21 | -71 | 1704 | -2 | -816 | -1952 | -3633 | 322 | 189 | -3862 |
| | III | 652 | -17 | -220 | 1670 | 36 | -711 | -2080 | -3807 | 413 | 284 | -3781 |
| | IV | 915 | -42 | -203 | 1958 | -15 | -722 | -2050 | -5390 | 514 | 251 | -4785 |

NOTE: A negative sign represents net imports. Imports are CIF, Exports are FOB.

SOURCES: Official Chinese customs statistics. (J6cbx77t.c6f, DT)

## Table 7-8
## VOLUME OF MAJOR IMPORT COMMODITIES BY QUARTER *

| | | Total Cereals | Wheat | Synthetic Fibers: | | Chemical Fertilizers | Polyethylene | Iron and Steel | Timber | Equipment Sets | Motor Vehicles |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Raw | Spun | | | | | | |
| **1982** | **I** | **3,500** | **2,940** | **104.88** | **37.73** | **1,342** | **77.87** | **654** | **630** | **655** | **3.88** |
| | II | 4,320 | 3,430 | 61.76 | 35.27 | 1,626 | 90.95 | 843 | 1,370 | 657 | 4.54 |
| | III | 4,250 | 4,020 | 34.57 | 16.50 | 1,472 | 113.58 | 958 | 1,280 | 440 | 2.86 |
| | IV | 4,080 | 3,410 | 37.58 | 7.89 | 1,620 | 139.19 | 1,317 | 1,340 | 358 | 4.81 |
| **1983** | **I** | **3,510** | **2,570** | **27.54** | **6.33** | **1,742** | **115.03** | **1,523** | **1,170** | **271** | **3.23** |
| | II | 3,800 | 2,840 | 25.01 | 6.79 | 2,228 | 59.34 | 2,072 | 1,330 | 356 | 4.66 |
| | III | 3,480 | 3,130 | 22.73 | 8.65 | 1,737 | 99.61 | 2,646 | 1,680 | 374 | 6.71 |
| | IV | 2,730 | 2,570 | 58.34 | 28.39 | 2,289 | 152.95 | 3,385 | 2,130 | 289 | 10.56 |
| **1984** | **I** | **2,950** | **2,830** | **49.81** | **37.87** | **1,932** | **139.09** | **2,690** | **1,820** | **265** | **11.14** |
| | II | 2,340 | 2,230 | 55.97 | 36.84 | 2,036 | 165.89 | 2,706 | 1,760 | 448 | 11.77 |
| | III | 2,390 | 2,220 | 67.97 | 39.12 | 2,530 | 186.17 | 3,119 | 2,070 | 416 | 54.32 |
| | IV | 2,730 | 2,590 | 96.21 | 60.18 | 2,719 | 204.36 | 3,775 | 2,240 | 575 | 63.98 |
| **1985** | **I** | **1,940** | **1,750** | **121.98** | **46.66** | **2,458** | **148.52** | **3,951** | **1,710** | **629** | **79.52** |
| | II | 1,420 | 1,250 | 117.29 | 56.35 | 2,224 | 158.37 | 4,760 | 2,270 | 945 | 95.80 |
| | III | 1,183 | 1,080 | 129.41 | 79.55 | 1,676 | 171.02 | 5,480 | 2,690 | 1,111 | 87.07 |
| | IV | 1,430 | 1,290 | 121.00 | 117.76 | 1,252 | 262.60 | 5,833 | 3,030 | 1,806 | 91.59 |
| **1986** | **I** | **1,845** | **N/A** | **85.78** | **67.77** | **663** | **N/A** | **3,820** | **1,906** | **N/A** | **37.32** |

* NOTE: Timber is in thousand cubic meters, equipment sets are in million US $, Motor vehicles are in thousand units, all others are in thousand tons.

SOURCES: Chinese Official Customs statistics; 1986'I figures are from **China Economic News** (5/5/86, p. 10-11). (NOTE: In CEN, "iron and steel" is translated as "rolled steel.") (J6bcx78t.c6f, DT)

The data on imports by commodity in Table 7-8, above, follow more comprehensive trends in SITC category data. They show just how strong growth in investment goods, including machinery, transport equipment, and metals, was through the end of 1985. The dip in first quarter 1986 steel imports is probably not indicative of any change in the recent overall growth of producer good imports, rather it reflects the industrial slowdown engineered late in 1985 in an attempt to cool down an overheated, inflationary economy.

Grain imports were beginning to increase by late 1985 in response to 1984's poor harvest. It seems likely that grain and cereal imports will rise through the second quarter of 1986, possibly approaching 1983 levels. Following the rapid drawdown of foreign exchange reserves, the volume of consumer imports was cut drastically, as shown below in table 7-9, in an attempt to conserve foreign exchange. Imports of computers fell off to nearly zero, while television, radio recorder, and even vehicle imports were slowed. One factor driving the consumer import boom in mid- and late-1985 was a government attempt to soak up excess money supply. It is possible that government acquiescence in this matter, combined with increasingly decentralized control over foreign exchange, allowed this "one-shot" consumer import boom during late 1985--a boom that is not to be repeated again in 1986.

Table 7-9
MONTHLY IMPORTS OF MAJOR COMMODITIES, 1985-MARCH 1986

| | | Synthetic Fibres | Iron Ore | Steel | Copper | Aluminum | Zinc | Computers | Vehicles | Televisions | Radio Recorders |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1985** | **Jan** | **32.8** | **321** | **1097** | **52** | **11** | **23.0** | **1989** | **25.6** | **323** | **122** |
| | Feb | 51.3 | 356 | 1389 | 26 | 30 | 20.0 | 2117 | 17.2 | 378 | 108 |
| | Mar | 39.9 | 538 | 1483 | 38 | 48 | 35.0 | 2098 | 36.0 | 362 | 120 |
| | Apr | 37.7 | 799 | 1318 | 34 | 28 | 30.0 | 2427 | 35.6 | 416 | 120 |
| | May | 37.7 | 792 | 1605 | 46 | 39 | 24.0 | 2062 | 28.9 | 424 | 127 |
| | Jun | 41.8 | 790 | 1785 | 28 | 34 | 17.0 | 3012 | 30.9 | 395 | 166 |
| | Jul | 40.2 | 1096 | 1922 | 22 | 29 | 23.0 | 917 | 33.0 | 399 | 141 |
| | Aug | 45.0 | 880 | 1841 | 22 | 41 | 14.0 | 1116 | 33.7 | 376 | 158 |
| | Sep | 43.9 | 974 | 1700 | 29 | 54 | 14.0 | 399 | 23.2 | 484 | 198 |
| | Oct | 41.3 | 643 | 1694 | 17 | 78 | 10.0 | 78 | 22.6 | 505 | 109 |
| | Nov | 30.3 | 843 | 1557 | 18 | 35 | 25.0 | 4 | 26.7 | 470 | 33 |
| | Dec | 34.5 | 1147 | 1844 | 19 | 42 | 19.0 | 76 | 24.1 | 326 | 63 |
| **1986** | **Jan** | **20.4** | **422** | **1192** | **10** | **30** | **22.0** | **60** | **9.9** | **131** | **53** |
| | Feb | 29.0 | 644 | 1467 | 27 | 23 | 19.0 | 2 | 14.6 | 145 | 31 |
| | Mar | 36.4 | 925 | 1154 | 17 | 12 | 17.0 | 12 | 12.9 | 159 | 75 |

UNITS: Metals and fibers in thousand tons, others in thousand units.
SOURCES: State Statistical Bureau, **Monthly Bulletin** (in Chinese), various issues. (j6bcx79t.c6f)

Exports strengthened measurably by end-year 1985 after a weak first three quarters, although they remain far behind imports. Petroleum exports grew in volume in the face of a softening world oil market. Coal exports jumped in the last quarter of 1985, a trend which has continued through the first quarter of 1986. Historically high cereal export levels were maintained through 1985, and remained high in the early months of this year. Another strong performer has been canned foods, an export item targeted for growth. Garments appear to have recovered their 1984 levels, after a very poor record in the first three quarters of 1985. Along with garments, exports of cotton yarn and fabric and polyester fabric have grown in late 1985. This can be traced to the bumper cotton harvest in 1985, which after a lag of several quarters is finally beginning to make its way to international markets. In general, exports in the first quarter of 1986 fared relatively well, and grew at a rate of 4.3% over first quarter 1985.

Table 7-10
VOLUME OF MAJOR EXPORT COMMODITIES BY QUARTER

| | | Total Cereals | Canned Food | Coal | Crude Pet-roleum | Refined Pet-roleum | Edible Oil Seeds | Cotton Yarn | Cotton Fabric | Poly-ester Fabric | Gar-ments (mil. pieces) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (Thousand tons) | | | | | | | (mil. meters) | | |
| 1981 | I | 220 | 85.5 | 1,500 | 2,640 | 920 | 104.97 | 10.03 | 289.0 | 92.7 | 78.1 |
| | II | 240 | 104.9 | 1,900 | 3,370 | 1,090 | 127.12 | 12.61 | 332.4 | 115.9 | 90.9 |
| | III | 160 | 91.4 | 1,720 | 3,920 | 1,380 | 44.52 | 10.94 | 320.1 | 114.0 | 104.6 |
| | **IV** | **250** | **97.7** | **1,820** | **3,930** | **1,280** | **29.34** | **14.12** | **336.3** | **147.5** | **105.2** |
| 1982 | I | 160 | 102.2 | 1,480 | 3,390 | 1,250 | 47.70 | 10.31 | 308.8 | 128.5 | 87.4 |
| | II | 220 | 85.7 | 1,690 | 3,880 | 1,140 | 59.91 | 12.12 | 276.6 | 133.2 | 101.3 |
| | III | 180 | 111.0 | 1,880 | 3,770 | 1,200 | 38.67 | 10.06 | 256.2 | 121.3 | 96.1 |
| | **IV** | **240** | **109.7** | **1,670** | **3,640** | **1,320** | **49.93** | **16.15** | **347.9** | **174.2** | **120.5** |
| 1983 | I | 250 | 97.0 | 1,500 | 3,070 | 1,130 | 83.68 | 13.48 | 293.5 | 126.1 | 99.5 |
| | II | 260 | 101.5 | 1,420 | 3,420 | 1,320 | 107.31 | 21.46 | 285.5 | 146.9 | 121.1 |
| | III | 270 | 105.4 | 2,080 | 4,630 | 1,280 | 87.03 | 37.84 | 361.0 | 182.9 | 115.0 |
| | **IV** | **370** | **99.7** | **1,850** | **3,700** | **1,180** | **83.13** | **41.76** | **431.4** | **207.4** | **120.8** |
| 1984 | I | 330 | 102.1 | 1,510 | 4,150 | 1,230 | 93.68 | 42.70 | 410.0 | 178.5 | 141.4 |
| | II | 640 | 107.3 | 1,820 | 5,590 | 1,500 | 111.86 | 39.84 | 446.5 | 186.2 | 141.2 |
| | III | 1000 | 101.0 | 1,820 | 5,700 | 1,550 | 74.47 | 39.39 | 443.3 | 163.2 | 126.7 |
| | **IV** | **1220** | **92.2** | **1,810** | **6,570** | **1,370** | **56.39** | **45.49** | **432.8** | **192.0** | **144.5** |
| 1985 | I | 1810 | 68.6 | 1,670 | 6,480 | 1,510 | 117.36 | 23.51 | 340.9 | 140.2 | 85.5 |
| | II | 2540 | 85.1 | 1,657 | 7,323 | 1,500 | 123.00 | 33.78 | 372.4 | 163.1 | 86.2 |
| | III | 2380 | 118.2 | 1,870 | 7,550 | 1,460 | 95.42 | 33.65 | 354.4 | 172.8 | 76.9 |
| | **IV** | **2590** | **117.9** | **2,570** | **8,680** | **1,750** | **73.82** | **63.77** | **605.6** | **259.6** | **114.2** |
| 1986 | I | 2054 | 78.2 | 2,135 | 5,779 | 1,101 | N/A | 30.33 | 395.9 | 183.7 | 103.2 |

NOTE: Units are in thousand tons except for fabrics which are in million meters and garments, which are in million pieces. Garment includes only non-knitted.

SOURCES: Official Chinese Customs statistics; 1986'I figures from **China Economic News** (5/5/86, p. 10-11). (NOTE: 1986'I garment figure calculated from growth rate, which differs from given flow.) (j6bcx80t.c6f)

Japan remains the major exporter to China despite a slight decline in the first quarter of 1986. Data in Table 7-11 illustrate the scale of China's increased reliance on its major trading partner, quarter-by-quarter from 1983 to 1985. By comparison, China's other trading partners seem to have gained only marginally, with the exception of Singapore (and the other ASEAN nations) which has registered an increasingly large deficit, and West Germany which has developed a strong and growing surplus.

Japan's net exports to China grew from very low levels in 1983 and early 1984 to more than 3 billion dollars by end-year 1984 and more than 8 billion dollars in 1985. For the United States, net exports in 1985 were 2.5 billion, more than double the total recorded in 1984. China's foreign exchange earnings from Hong Kong fell substantially in 1985.

### Table 7-11
### NET EXPORTS BY PARTNER COUNTRY, 1981-1985
(Million US Dollars)

| Year/Qtr | Total | Japan | United States | Canada | West Germany | USSR | Singapore | Hong* Kong | Other |
|---|---|---|---|---|---|---|---|---|---|
| 1981* | 439 | -349 | -671 | -218 | -75 | -8 | 139 | 1,008 | 613 |
| 1982* | 1,150 | 227 | -525 | -238 | -12 | -25 | 134 | 969 | 620 |
| 1983 I | 505 | 128 | -379 | -262 | -39 | -41 | 139 | 838 | 122 |
| II | 1,204 | -216 | -219 | -303 | -6 | -33 | 95 | 1,004 | 882 |
| III | 1,194 | -435 | 56 | -300 | -70 | 12 | 98 | 1,084 | 748 |
| IV | 603 | -542 | -281 | -357 | -54 | -61 | 129 | 1,154 | 614 |
| 1984 I | 888 | -197 | -300 | -185 | -58 | -57 | 181 | 999 | 505 |
| II | 1,292 | -460 | -17 | -161 | -93 | 35 | 196 | 1,050 | 743 |
| III | 630 | -697 | -197 | -173 | -37 | -10 | 308 | 917 | 519 |
| IV | -907 | -1,647 | -661 | -190 | -121 | -57 | 391 | 789 | 589 |
| 1985 I | -2,039 | -1,521 | -666 | -296 | -250 | -12 | 369 | 374 | -36 |
| II | -2,850 | -2,267 | -718 | -181 | -361 | -18 | 475 | 408 | -188 |
| III | -2,724 | -2,426 | -426 | -209 | -408 | 47 | 446 | 670 | -418 |
| IV | -3,440 | -1,975 | -699 | -207 | -499 | 2 | 523 | 442 | -1028 |

*Average Quarterly Net Exports.
NOTE: Exports FOB, Imports FOB.
SOURCES: 1983 I - 1985 IV: **China's Customs Statistics**, various issues, 1984-86. (j6bcx81t.c6f)

China's deficit with Japan accounts for a full three-quarters of the total 1985 deficit, and within Japan's trade, machinery and equipment again account for almost all of the total shortfall. China's 1985 trade preference for Japan is shown very clearly in Table 7-12, below, which gives one-digit SITC trade with each of China's major trading partners for both the average 1985 quarter and third quarter 1985 net exports. The first column to the left shows the overall pattern clearly. Net imports of Machinery and Transport (SITC 7) more than account for the total trade deficit.

It is particularly interesting to see the growing degree to which Japan's trade position with China overshadows that of the United States. Japan's net earnings from machinery and transport sales averaged over five times those of the United States in the first three quarters of 1985. When it is remembered that a significant portion of Hong Kong's net exports to China also originated in Japan, Japan's dominance of SITC 7 is even more impressive. In most categories Japan's net exports are more than twice those of the United States, and in the important telecommunications market, United States sales are dwarfed by Japan's (see table 7-13, below, on page 7- for two digit SITC imports and exports).

This contrast in trade patterns between Japan and North America reflects a more long-run difference. Data on China's imports in Table 7-11, above, show that Japan's sales fell much more sharply in the 1982 cutback than those of the U.S. and Canada, just as they are surged more rapidly now, as import restrictions have been eased. In turn, with the recent tightening of foreign exchange and overall import policy, Japan's quarterly surplus has begun to decrease slightly. Total trade in the first quarter of 1986 between the two countries has decreased 13 percent over the first quarter of 1985. This figure implies a continued slide in the dollar value of tne deficit.

Examination of net exports by partner country at the one-digit level reveals where most of the competition is. Japan's strengths are in metals and machinery, while North America has done well in foods, timber, and chemicals. The strength of Japan's trade position, however, is emphasized by data on net exports at the two-digit level of SITC detail. (For details, see Table 7-13.) Overall, China makes money on mineral fuels and light manufactures (mostly apparel) and spends it on chemicals, metals, and machinery. The materials, metals and machinery come overwhelmingly from Japan, while the U.S. and Canada have some advantage in supplying chemicals.

For food and crude materials, Japan does not really compete with North American suppliers. There is, however, strong competition in SITC category 7 (machinery and transport equipment), and Table 7-12 shows clearly how much more successful Japan has been in making money from this class of commodities. Japanese net exports were more than triple those from the U.S. and far greater than those from any of China's other trading partners. West Germany has, however, made significant, consistently increasing inroads into this market. In general, competition for sales to China is concentrated in SITC categories 5, 6, and 7 (chemicals, materials and metals, machinery and transport). Canada, West Germany, and even the USSR show significant net exports to China for these goods.

Sino-Soviet trade has grown significantly through all four quarters of 1985, and during the first quarter of 1986. Table 7-12 highlights the rapid growth of third quarter trade over average quarterly trade for the first three quarters of last year. China has taken advantage of relatively open borders in Xinjiang and Heilongjiang provinces to increase exports of food and light manufactures, while the Soviet Union is exporting producer goods and certain consumer manufactures to China. Producer good exports include chemical fertilizers, electrical machinery, and transport equipment; consumer goods are mainly appliances such as refrigerators which are priced far enough below Japanese products so as to overcome the quality differential. In addition to trade with the Soviet Union, China is also moving to increase trade with East European countries, especially Hungary and Rumania.

### Table 7-12
### 1985 AVERAGE QUARTERLY NET EXPORTS
### 1985'I-III Only
### (Million US Dollars)

| SITC Code | Total | Japan | United States | Canada | West Germany | USSR | Singapore | Hong Kong | Other |
|---|---|---|---|---|---|---|---|---|---|
| Total Net Exports | -3451 | -2075 | -602 | -228 | -341 | 6 | 430 | 486 | -1128 |
| (0) Food and Animals | 453 | 165 | -15 | -101 | 18 | 75 | 33 | 270 | 7 |
| (1) Beverages and Tobacco | -19 | 0 | -14 | 0 | 0 | 0 | 1 | 2 | -10 |
| (2) Crude Materials | -120 | 97 | -173 | -53 | 31 | 35 | 0 | 103 | -159 |
| (3) Mineral Fuels | 1660 | 802 | 155 | 0 | 0 | 0 | 387 | 70 | 246 |
| (4) Fats and Oils | 10 | 4 | -2 | 0 | 0 | 3 | -3 | 3 | 6 |
| (5) Chemicals | -792 | -143 | -247 | -27 | -46 | -42 | -9 | 31 | -309 |
| (6) Materials and Metals | -1784 | -954 | 0 | -60 | -119 | -47 | 24 | 212 | -840 |
| (7) Machinery and Transport | -3447 | -1989 | -394 | -13 | -250 | -44 | -8 | -296 | -453 |
| (8) Light Manufactures | 356 | -36 | 83 | 28 | 22 | 25 | 6 | 80 | 147 |
| (9) Other Commodities | 233 | -20 | 4 | 0 | 1 | 0 | 0 | 10 | 239 |

SOURCES: **China's Customs Statistics**, 1985 issues.

### Table 7-13
### THIRD QUARTER 1985 SITC ONE-DIGIT NET EXPORTS BY TRADING PARTNER
### (Million US Dollars)

| SITC Code | Category | Total | Japan | United States | Canada | West Germany | USSR | Singapore | Hong Kong | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | | -3816 | -2427 | -426 | -209 | -408 | 46 | 446 | 670 | -1509 |
| (0) | Food and Animals | 658 | 173 | 11 | -69 | 20 | 177 | 38 | 285 | 23 |
| (1) | Beverages and Tobacco | -17 | 0 | -14 | 0 | 0 | 0 | 0 | 8 | -12 |
| (2) | Crude Materials | -222 | 98 | -215 | -59 | 39 | -1 | -2 | 125 | -208 |
| (3) | Mineral Fuels | 1685 | 775 | 170 | 0 | 0 | 0 | 394 | 64 | 282 |
| (4) | Fats and Oils | 36 | 4 | 0 | 0 | 0 | 0 | -5 | 4 | 33 |
| (5) | Chemicals | -718 | -162 | -200 | -31 | -32 | -49 | -8 | 34 | -270 |
| (6) | Materials and Metals | -2099 | -1065 | 163 | -49 | -133 | -42 | 31 | 248 | -1253 |
| (7) | Machinery and Transport | -3842 | -2182 | -415 | -24 | -333 | -77 | -10 | -230 | -570 |
| (8) | Light Manufactures | 417 | -45 | 70 | 24 | 31 | 30 | 6 | 119 | 182 |
| (9) | Other Commodities | 286 | -24 | 5 | 0 | 0 | 0 | 0 | 12 | 293 |

SOURCES: Calculated from **China's Customs Statistics**, 1985 III and 1985 IV, Economic Information and Agency (sic).

For Singapore and Hong Kong, however, the pattern is markedly different. Hong Kong and Southeast Asia have traditionally been net foreign exchange earning markets for China, and Table 7-12 above shows that in addition to light manufactures, China provides them with foods, fuels, and semi-finished materials. Both remain a reexport base for manufactured goods produced in Japan, and, increasingly, in Taiwan and South Korea.

At the two-digit level, Table 7-13 shows how much Japan commanded China's third quarter 1985 net imports of electrical machinery, office and data processing equipment, telecommunications systems, and road vehicles. Japan's net earnings from electrical machinery sales continue to more than double those for West Germany and the United States, a trend established as early as 1984. In telecommunications equipment and road vehicles, Japan's sales dwarfed those by all other competitors. Only in office and data processing equipment did the United States approach Japan's level of performance. Even plastics and textile yarns imports are dominated by Japan. Since these are all areas in which continued investment imports are expected to be concentrated, Japan's 1984 strength, which continued well into 1985, appears to have established trade patterns for the near future.

A final trend which has received little attention but is very important to China's overall trade position is devaluation. September 1985 saw the beginning of a gradual devaluation of the yuan in what appeared to be the first significant deviation in nearly five years from the de-facto exchange rate (internal settlement rate) of 2.8 yuan/dollar. By March 1986, the yuan had been devalued by 15 percent to 3.22 yuan per dollar.

This devaluation has been even more pronounced vis-a-vis the Japanese yen. While the Chinese at one time maintained that the yuan's value relative to any single currency was determined by a weighted average of several major world currencies, the almost constant yuan-dollar rate since late 1985 (during which time the yen in particular has revalued so strongly) confirms that the Chinese leadership has tied the yuan to the dollar and decided to allow the yuan to devalue with respect to the yen. In fact, gradual devaluation began in April of last year and continued through September, during which time the yuan lost 10 percent of its value. From September 1985 to February of this year the yuan lost an additional 30 percent, resulting in an overall devaluation of nearly 40 percent in less than a year (from 91 yen/yuan in March 1985 to 57 yen/yuan in February 1986).

## POLICY

In early 1986, China announced in the Seventh Five-Year Plan (1986-1990) a continued commitment to domestic development and increased international economic relations. Technology imports are seen as necessary for the achievement of China's long-term modernization goals, and exports are necessary to pay for these imports. The dollar value of total trade is to be increased at a rate of 7 percent per year, with export growth (8.1 percent per annum) to exceed import growth (6.1 percent). Zheng Tuobin, minister of Foreign Economic Relations and Trade, recently announced that foreign currency to be spent on technology imports will amount to only 10 to 12 percent of China's foreign currency expenditures during the plan period, implying that much of the foreign exchange China earns in the coming years will be plowed back into export-oriented industries.

Witnin this framework, China's long term trade policy indicates a strong linkage between its imports and the receptivity of foreign markets to its exports, a policy dictated in large part by foreign exchange needs. Urban enterprise reforms enacted in late 1984 and early 1985 appeared to have relaxed the linkage somewhat by decentralizing trade and borrowing decisions. However, given the import growth and rapid drawdown of foreign exchange reserves in late 1985, the State has been forced to implement a fundamental trade policy shift. To counter explosive imports, the state has strengthened the role of the banking system and has imposed commodity-specific import controls on consumer goods. In March of this year the Ministry of Foreign Economic Relations and Trade (MOFERT) raised the number of items requiring import permits from 30 to 45, adding commodities such as rubber, steel, fertilizers, and pesticides to the list, which contains mostly manufactured goods and assembly lines to produce those goods. China has maintained a commitment to preserve currency strength and stability by avoiding currency devaluation, but devaluation is apparently now unavoidable.

Many factors point to a policy linking bilateral exports and imports. The degree of trade linkage varies from country to country. At one extreme, Sino-Soviet trade is close to pure barter. Under a pact announced last year the Soviets were to supply machinery, transport equipment and chemicals, and invest in building and modernizing 24 industrial plants in return for agricultural and industrial raw materials and consumer goods from China. The United States trade relationship is based much less on such barter agreements. However, when the United States has imposed new limits on textile imports, China has countered by cutting back on agricultural imports from the United States.

Japan, with its massive exports of machinery to China in 1985, upset what may have been the clearest example of this linkage. In 1984 and early 1985 China was trading crude oil for Japanese steel of equal value. This formed a basis for the Sino-Japanese trade relationship. Explosive growth in machinery and transport equipment exports to China, combined with the above-mentioned yen/yuan revaluation, knocked this relationship seriously out of balance. In the wake of very large deficits in 1985, China has attempted to reduce the volume of imports from Japan by cutting consumer imports and non-essential producer good imports. However, the deficit remains large, perhaps politically untenably so. To regain some element of balance in its trade relationship with Japan China appears likely to shift its import focus to other OECD nations, especially those in the EEC such as West Germany and Great Britain, and, increasingly, the Soviet Union and Eastern Bloc nations.

One area where China has moved away from this evolving bilateral framework is in its trade relations with the Third World. As China has opened to the West in search of technology during the 1980s, traditional economic and political alliances with developing nations in Africa and Southeast Asia have become less pronounced. In their drive to export a relatively underdeveloped product mix, the Chinese have had to compete more directly with other developing nations. To gain an advantage China has begun to experiment with flexible payment arrangements such as countertrade, including barter, buyback, counterpurchase, and compensation trade agreements, as well as with international financial instruments such as International Trading Certificates (ITCs). While these developments are primarily aimed at decreasing foreign exchange outflows, creative financing has allowed China to compete more effectively in trade at the margin of profitability.

Table 7-14
SELECTED SITC 2-DIGIT EXPORTS AND IMPORTS
Third Quarter 1985
(Million US Dollars)

| SITC Code | Japan | United States | Canada | West Germany | USSR | Singapore | Hong Kong | Other |
|---|---|---|---|---|---|---|---|---|
| EXPORTS | | | | | | | | |
| (04) Cereals | 257 | 0 | 0 | 2 | 84 | 36 | 148 | 218 |
| (05) Vegetables & Fruit | 98 | 39 | 24 | 42 | 3 | 19 | 153 | 123 |
| (22) Oilseeds | 115 | 0 | 0 | 6 | 101 | 7 | 27 | 149 |
| (26) Textile Fibers | 195 | 8 | 0 | 48 | 36 | 9 | 182 | 320 |
| (32) Coal & Coke | 117 | 0 | 0 | 0 | 0 | 0 | 31 | 80 |
| (33) Petroleum | 2299 | 474 | 0 | 0 | 0 | 1167 | 186 | 703 |
| (65) Textile Yarns, Fabrics | 276 | 174 | 33 | 67 | 93 | 58 | 849 | 572 |
| (69) Metal Manufactures | 3 | 43 | 4 | 14 | 2 | 11 | 63 | 145 |
| (84) Apparel | 264 | 405 | 76 | 85 | 59 | 7 | 163 | 327 |
| (89) Misc. Manufactures | 57 | 75 | 7 | 32 | 9 | 12 | 203 | 178 |
| IMPORTS | | | | | | | | |
| (26) Textile Fibers | 142 | 116 | 2 | 17 | 0 | 0 | 14 | 558 |
| (56) Chemical Fertilizer | 16 | 410 | 51 | 29 | 127 | 0 | 0 | 643 |
| (58) Plastics, etc. | 268 | 208 | 28 | 61 | 3 | 40 | 28 | 299 |
| (65) Textile Yarns, Fabrics | 209 | 105 | 0 | 17 | 0 | 0 | 234 | 490 |
| (67) Iron & Steel | 2634 | 19 | 0 | 384 | 163 | 13 | 35 | 1783 |
| (68) Non-ferrous Metals | 107 | 79 | 151 | 25 | 54 | 4 | 55 | 728 |
| (72) Electrical Machinery | 1150 | 483 | 5 | 382 | 14 | 12 | 219 | 706 |
| (76) Telecom. Equip. | 1366 | 43 | 8 | 31 | 0 | 12 | 291 | 64 |
| (78) Road Vehicles | 1773 | 26 | 9 | 65 | 82 | 0 | 14 | 307 |
| (79) Other Transport | 233 | 233 | 15 | 170 | 39 | 0 | 9 | 273 |

Sources: **China's Customs Statistics.**

The trade deficit and, correspondingly, China's trade policy cannot be isolated from other developments in China's domestic economy. The industrial reforms implemented in the last eighteen months have encouraged enterprises to pursue profit rather than fulfill planned foreign exchange goals. Therefore, enterprises which faced better domestic prices for their goods than the world market price cut back on exports, while others were able to take advantage of the strong demand for consumer durables such as vehicles and televisions by increasing imports. These trends have continued to some degree, but recent policy measures have begun to address the problems.

Control over decisions to commit foreign exchange have been tightened in response to the rapid drain on hard currency funds throughout 1985. As early as July 1985, a regulatory tax was placed on imports of motor vehicles, computers, and video-cassette recorders, among other manufactured goods. Late in the year more severe controls on the importation of consumer goods were reported. Shipments of goods ordered, but not yet paid for, were left on docks in Hong Kong and Shanghai. Profiteers and other "economic criminals" were attacked in the press. The border between Guangzhou Province and the

Shenzhen Special Economic Zone has been closed to limit commodity and currency trafficking. These measures have brought about a drastic reduction in consumer goods imports, but the fundamental problem of a commodity trade deficit has continued because of the overwhelmingly large expense embodied in producer good imports.

Export growth is the only way Peking can continue to foot the bill for the economic transformation currently underway in China. One way the government has tried to improve the export abilities of domestic enterprises is the above-mentioned devaluation of the Yuan against both the dollar and the Yen. Continued gradual devaluation appears to be one of the major policies aimed at supporting export growth. Domestic price reforms enacted late in 1985 should also improve enterprise managers' information and decision-making capabilities.

More direct measures have included the designation of certain enterprises as "export-oriented" enterprises, which gives them priority in credit allocation, funding, technology distribution, and equipment acquisition. Many of these enterprises produce light manufactures with a higher value-added than China's current export mainstay, raw and semi-finished materials.

As a supplement to earning foreign exchange, China has recently shown a much greater willingness to borrow internationally to cover the current account deficit and maintain foreign exchange reserves than it did in the early 1980s. International lending to China was substantial in 1985, much of it in the form of short-term credits which will require relatively early refinancing. The large positive net lending figure appearing in Table 7-3, China's summary balance of payments, indicates that the various managers of foreign exchange and foreign debt throughout the government may have temporarily lost track of China's capital account.

Although some Chinese sources have informally indicated a willingness to borrow as much as 40 billion U.S. dollars in the new Five Year Plan period (1986-90), Chinese policy in this area is not clearly stated and appears to be in flux.

## PROBLEMS

China's foreign trade and payments, the acquisition and use of foreign exchange, face a host of problems, some standard for a poor developing country and others unique to China. Like so many poor countries, China has difficulty disciplining imports, has an overvalued currency, and faces protectionism for standard manufactured exports. Like oil-exporting countries everywhere, China since early 1986 has had to face the added problem of sharply dropping world oil prices and rapidly declining oil revenues, once considered so dependable.

But problems unique to China present perhaps the greater challenge. There is a strong contradiction between China's economic reforms and the need to earn and conserve foreign exchange. On the import side, the reforms seek to make enterprise managers more independent from government control. On the export side, this same independence has made plants reluctant to export, given the unrealistically more attractive domestic pricing. The major problem is that solutions to these problems require not just one policy step, but a coordinated combination of policies, and this need for coordination between trade and reform policies may be the biggest challenge of all.

Export incentive problems remain difficult, in large part because China's domestic prices are so out-of-line with international prices that domestic firms, which keep their books in yuan, find it more profitable to sell manufactures domestically than abroad at the current exchange rate of 3.22 yuan/dollar. Before the reforms, the foreign trade corporations (FTCs), motivated to earn foreign exchange, had been willing to take domestic yuan losses on some products to earn dollars. They made up the losses on exports of other products as well as imports of goods which brought significant yuan profits. The post-reform decentralized system, however, gives no such compensation, and so exports of many light manufactured goods have faltered seriously. In the meantime, individual firms have been encouraged to export directly, and the role of the traditionally powerful FTCs has been significantly weakened.

Price reforms enacted in early 1986, in part through inflationary changes of relative price levels of various commodities, have not had any great effect on exports. This is because inflationary price rises of some commodities have not been met with price decreases of others; when domestic prices rise there is even less incentive for enterprises to expend extra effort marketing their products internationally. Unless inflationary price adjustments are met with currency devaluation, decentralized incentive changes encouraging enterprises to export will have limited effectiveness.

Recently publicized black market operations have been run at rates as high as 5.0 and 5.4 yuan/dollar. The solution to China's currency valuation problem requires adjustment of over-inflated domestic retail prices for those manufactures on the one hand, and a further devaluation of the exchange rate on the other. However, a policy of more mini-devaluations, because of the expectations for further devaluations it creates, could exacerbate the short-term trade deficit, under-representing China's long-run trade strengths. If continued gradual devaluation seemed likely, importers would step up their orders in an attempt to get delivery and payment settlements as quickly as possible. Conversely, exporters would delay accepting orders and payments if they thought they could soon get better terms with a continually weakening yuan.

Not only are export incentives weak, but world market conditions for China's exports also have become increasingly difficult. Recent declines in oil prices have had a significant negative impact on China's foreign trade and payments situation. Zheng Tuobin, minister of Foreign Economic Relations and Trade, has estimated that for every one dollar fall in the price of a barrel of crude oil China loses more than 200 million dollars. Given the 10 dollar per barrel decline registered over the first quarter of 1986, Chinese hard currency earnings have dropped by more than 2 billion dollars. If exports of other commodities cannot make up lost oil revenues, China will have to cut imports or borrow on world financial markets.

Falling oil earnings place new importance on China's manufactured exports, just as they face strengthening protectionism in a slowly growing world economy. For China, this problem is more serious than for any other poor country because of the potential scale of China's export drive. It was relatively easy for the United States to absorb imports from Taiwan and South Korea during the 1960s economic boom. U.S. imports from China on a comparable scale, more than twenty times as great, is not a practical consideration. In this sense, China's export marketing problem is a more general problem for the maturing world economy: how to absorb output from the emerging industrial capacity of much of the developing world without triggering trade wars damaging to all.

## PROSPECTS

The prospects for China's foreign trade and payments indicate that 1986 and 1987 will see some success in controlling the recent current account deficits through both recentralized export promotion and moderate controls on imports. At the same time, relatively large short-term borrowings, many in the form of merchandise credits, will be converted to longer-term obligations.

Perhaps the single most striking trend will be the growth of manufactured exports to make up for lost petroleum revenues and to pay for imports of producer goods, which will continue on a large scale. The growth in manufactured exports will be driven by a recentralization of export promotion, including the reinstatement of many subsidy mechanisms needed to counterbalance disincentives wrought by domestic price irrationalities. In addition, China will use direct bilateral negotiations with major trading partners such as Japan and Brazil to ensure that Chinese purchases of imports are matched to a significant degree by foreign purchases of exports. Given the degree of central control over imports still enjoyed by Peking this strategy will in large part be successful.

Although China will thus correct the exaggerated current account deficits of the late-1984 to early-1986 period, the reinstitution of direct controls will not signal a major contraction of imports and a renewed build-up of foreign exchange reserves similar to that of 1981-84. Chinese foreign economic trends will instead reflect the changing conditions in China's domestic economy, which have made importation of foreign technology and materials more efficient and more directly supportive of export earnings. As indicated in the macroeconomic projections found in Tables 2-7 and 2-8 in Chapter 2, China will most likely have only a mild current account deficit if any at all, as foreign debt is limited to a conservative debt service ratio.

Reform of the foreign exchange system is likely to continue. In response to the greatly increased need for foreign exchange in the market-oriented economy, systemic changes would deal with retention of foreign exchange by export businesses, the level of State foreign exchange reserves, and the exchange rate.

The yuan may be devalued to 3.5 or 4.0 yuan/dollar by 1987. Indeed, eventual abolition of foreign exchange certificates might be used as a cover to shift to a different exchange rate vis-a-vis the Renminbi, given domestic political opposition to "weakening" the national currency.

In sum, it is likely that in the next five years China will be able to expand exports rapidly, especially in light manufactures such as garments and processed foods. As a result of this expected growth, import levels will also remain high, especially for producer goods. As a result of the likely commodity trade deficit and the level of foreign exchange reserves already considered low, foreign borrowing, both subsidized and at commercial rates, will also continue. But invisible receipts, which have grown steadily over the last two years, will have an important moderating effect on borrowing needs.

## CHAPTER EIGHT -- Agriculture

### EXECUTIVE SUMMARY

| | |
|---|---|
| TRENDS | * The 1985 decline in crop output is associated with bad weather and incentive reforms. Long-term rapid growth is a better indicator of current trends.<br>* Other farm sectors have continued to grow rapidly in 1985. |
| POLICY | * Special steps to stimulate grain output target different areas with varied prices, often higher, than in 1985.<br>* In some areas, fertilizer and diesel fuel are given to encourage grain output.<br>* Numerous 1986 policy steps strengthen individual incentives but involve indirect government manipulation. |
| PROBLEMS | * Grain supply to deficit areas, especially cities, is China's most fundamental agricultural problem.<br>* Fertilizer shortages, low quality levels, and high prices reflect the general low level of fertilizer industry development. |
| PROSPECTS | * 1986 crop output will recover strongly and animal husbandry will continue its rapid growth.<br>* Grain output will rise only moderately, in spite of new prices. |

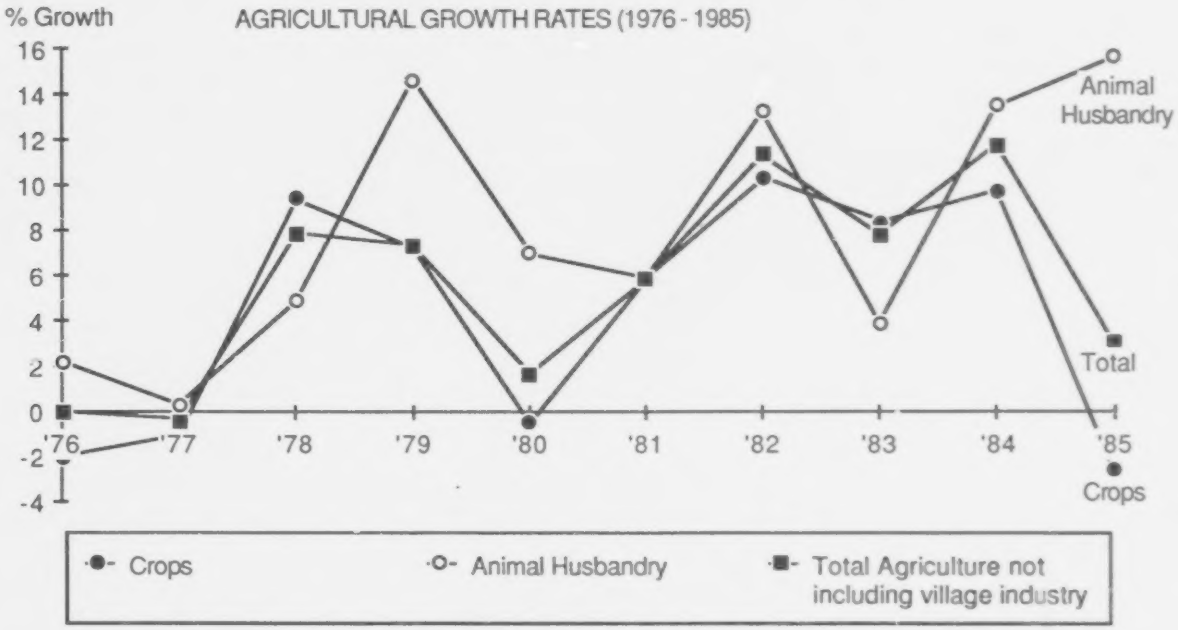
### TRENDS

The two most important trends in China's agricultural economy have been the high rates of long-term output growth, in spite of the 1985 slowdown, and the continued unfolding of rural reforms in a "phase two" stage emphasizing commercialization of the rural economy. Together these two dimensions represent sweeping changes in China's agriculture since Mao's death, changes which have transformed the rural economy from a collectivized system of communal farms to a decentralized system of owner-tilled land. The two major trends, output growth and continued reform, are closely related: incentives introduced by reforms are a major reason for the output growth, and output growth has been regarded as proof of reform success, justifying further reforms.

The pattern of new reforms bringing new output success was interrupted in 1985, however, after four years of rapid growth. Causes of slower growth in agricultural output during 1985 (3 percent -- see Table 8-1) were: bad weather, the introduction of new reforms, especially a contract purchase system for grain with lower prices, and the breakup of state farms in the Northeast, one of China's major grain centers. The degree of recovery from the 1985 slowdown will not be known until the end of 1986 or early in 1987, as most of China's crops are harvested late in the year.

There were sufficient anomalies during the 1985 crop year, especially droughts and typhoon flooding, that its record can be discounted as a sign of long-term trends in China's agricultural output. Long-term trends are better represented by growth patterns since the late 1970s, when major reforms were first implemented. Crop output growth, traditionally the slowest of all agricultural sectors, was greater than 8 percent in 1984 for the third consecutive year. Except for 1980, which was also a year of severe droughts and floods, crop output growth did not fall significantly below 6 percent per annum in any year between 1977 and 1984 (see Table 8-1, below).

Diagram 8-1


AGRICULTURAL GROWTH RATES (1976 - 1985)

This long-term pattern of output success has been due to a combination of favorable weather and early rural reforms. Rural reforms, in turn, have two major components: privatization of assets in nearly all agricultural sectors and rapid commercialization of rural economic life. Reforms have introduced incentives for farm households to specialize production, to increase the use of markets, and to gradually adopt better methods, whether technical, such as vinyl greenhousing, or managerial, as reflected by shifts in cropping and output patterns.

Of the rural reforms by far the most fundamental has been rural land tenure reform, which after 25 years of communal organization redistributed land to individual farmers. Farmers in private conversation no longer call the program the "individual responsibility system," as it is officially known, but rather the "individual ownership system." China's agriculture is now essentially private owner-tiller agriculture, and what is more, owner-tiller agriculture with, by poor-country standards, remarkably egalitarian distribution of land, herds, and other assets. This relatively egalitarian distribution of productive assets implies relatively equal incomes, with profound implications for the nature of China's future economic growth and related social development.

Rural output as discussed above does not include village industry (sometimes called brigade industry). As traditionally measured by Chinese statisticians, however, the overall growth in agricultural value reflects not only growth in traditional sectors, but also the growing significance of village industry, which has averaged annual growth of 22.2 percent over the past 13 years. This sector now contributes more to the gross value of agriculture than animal husbandry, making it the second largest component in agricultural output value.

Precisely because of the rapidly growing output value of village industry, Chinese statisticians have begun to classify it as part of industrial output rather than agricultural output. Furthermore, the overall significance of village industry has been brought into question by recently published statistics implying that only a very small part of the gross output (roughly 5 percent) is actually value added. In other words, even though total turnover is very high, actual increase in value, and hence actual employment, is low. Growth in rural employment may be greater in the rural service sectors than in village industry, but statistical evidence is not available.

Table 8-1

GROSS AGRICULTURAL GROWTH AND OUTPUT VALUE, 1976-85

| | Crops | Forestry | Animal Husbandry | Fishery | Village Industry | Other Sidelines | Total Agriculture | Total without Village Industry |
|---|---|---|---|---|---|---|---|---|
| Growth (Percent) | | | | | | | | |
| 1976 | -2.0 | 15.6 | 2.2 | 1.0 | 44.8 | 12.5 | 2.2 | .0 |
| 1977 | -1.0 | -1.9 | .3 | 5.2 | 23.2 | 7.2 | 1.3 | -.4 |
| 1978 | 9.4 | 5.5 | 4.9 | .0 | 15.4 | 2.2 | 8.5 | 7.9 |
| 1979 | 7.2 | 1.4 | 14.6 | -3.4 | 16.4 | -3.5 | 8.1 | 7.3 |
| 1980 | -.5 | 12.2 | 7.0 | 7.6 | 21.3 | -7.1 | 3.0 | 1.1 |
| 1981 | 5.9 | 4.1 | 5.9 | 4.4 | 12.2 | 24.0 | 7.1 | 6.5 |
| 1982 | 10.3 | 8.5 | 13.2 | 12.3 | 9.7 | 21.9 | 11.1 | 11.3 |
| 1983 | 8.3 | 10.2 | 3.9 | 8.6 | 23.3 | 11.6 | 9.6 | 7.8 |
| 1984 | 9.9 | 19.0 | 13.4 | 17.6 | 53.4 | 34.3 | 17.7 | 12.3 |
| 1985 | -1.9 | 3.6 | 15.6 | 17.2 | 62.2 | 18.9 | 13.1 | 3.0 |
| (billion 1980 Yuan) | | | | | | | | |
| 1985 | 193.00 | 14.5 | 55.5 | 6.8 | 93.5 | 20.6 | 383.8 | 290.3 |

SOURCES: State Statistical Bureau, **Tongji**, 5/86, p.44 and **1985 China Statistical Yearbook**; (J6BCA01S.N6F).

Table 8-1, above, shows the sustained growth in virtually every agricultural sector through 1984 and the slowdown in 1985 brought about almost entirely by the reduction in crop output, which accounts for 70 percent of all output. The pace of output growth from 1980 to 1984 was particularly impressive. At the same time, very rapid growth in village industry is shown to have had a major influence on agricultural growth rates as traditionally measured, with the exception of 1982, when official restrictions slowed light industrial growth. The difference in output with and without village industry can be seen in the two right-hand columns of Table 8-1.

The major source of output value in China's agriculture is crop output, and the principal components of the 2 percent decline in 1985 are seen clearly in Table 8-2, below. Grain output fell 7 percent and cotton output was down 34 percent. The decline in grain output is particularly significant, not only because grain is the single largest component in crop output, but also because grain production was such a central feature of Maoist China's agricultural policy. Success or failure of any year's grain crop was traditionally interpreted as proof of success or failure for the overall agricultural record. Grain output in 1985 was given special prominence in a September 1985 speech by Chen Yun, patriarch of Chinese economic theory. Chen Yun's cautions not to neglect grain have been taken by some observers to be a veiled expression of his dissatisfaction with the entire reform program.

Given the importance of grain, both economically and politically, it is useful to note that the sharp 1985 decline was caused by a combination of three factors: first, poor weather in different parts of China, especially in the northeast, second, the introduction of a variety of reforms over the years with direct significance for grain, and third, the very high output growth recorded in 1982-84, in comparison with which almost any normal 1985 growth record would have appeared unimpressive.

Although weather statistics are not available in any easily usable form, clear reports in mid-1985 of severe drought in the Northeast grain basin, followed by successive typhoons and flooding and the ruination of large sections of planted cropland, must be given some weight in an explanation of output declines. Provincial data on output show that the production decline in several of these major grain-producing provinces was as much as 33 percent. At the same time, however, many Chinese observers also point to the contract procurement system and other reforms related to grain as bearing heavy responsibility for the decline.

Table 8-2
GROWTH OF MAJOR AGRICULTURAL COMMODITIES, 1980-85

| | Grain | Cotton | Oil Seeds | Sugar Crops | Jute & Hemp | Meat | Milk |
|---|---|---|---|---|---|---|---|
| (Percent Growth) | | | | | | | |
| 1980 | -3.5 | 22.7 | 19.5 | 18.3 | 0.8 | 13.5 | - |
| 1981 | 1.4 | 9.6 | 32.7 | 23.8 | 14.8 | 4.6 | 13.1 |
| 1982 | 9.1 | 21.2 | 15.8 | 21.0 | -15.9 | 7.1 | 25.3 |
| 1983 | 9.2 | 28.9 | -10.7 | -7.5 | -3.9 | 3.8 | 14.0 |
| 1984 | 5.2 | 35.0 | 12.9 | 26.3 | 46.4 | 9.9 | 18.9 |
| 1985 | -7.0 | -33.7 | 32.5 | 26.3 | 127.8 | 13.9 | 14.4 |
| (Million Tons) | | | | | | | |
| 1985 | 379 | 4.2 | 15.8 | 60.4 | 3.4 | 17.6 | 2.5 |

SOURCES: State Statistical Bureau, March Communique on 1985 plan fulfillment and **1985 China Statistical Yearbook**.

The most-often cited and most fundamental 1985 reform affecting grain was the implementation of "phase two" of China's rural reforms, shifting strongly away from direct government procurements, as under the old planning system, toward commercialized grain purchases by contract. Because the contracts effectively lowered the price of grain from its high 1984 levels, and because in many areas the usual state delivery of fertilizer at low or no cost was also suspended, many farmers chose not to plant as much grain and not to use as much fertilizer in dressing the crops they did plant. When forced to pay high prices for mediocre-quality fertilizer, many farmers apparently decided that the increased value output was not justification for increased purchases. As a result, this major step forward in the commercialization of China's grain sector was also a significant reason for the 1985 output decline.

A second reform program, however, also may have had some influence. "Phase one" of the rural reforms, begun in 1979, transferred most of China's farmland to individual family care. However, State farms under direct control of the Ministry of Agriculture were largely exempt from decollectivization. It is now clear that 1985 saw the extension of the land reform even to state farms, with most of state farm land broken into family holdings. Much of the grain basin in the Northeast, which is relatively sparsely populated, was organized into state farms; it is possible that the 1985 ownership transfer had a transitionally negative effect on land planted to grain and on its cultivation.

Table 8-3
OUTPUT OF ANIMAL HUSBANDRY PRODUCTS, 1980-85
(Percent Growth)

| Year | Pork | Beef | Mutton | Pork, Beef, Mutton | Eggs | Milk |
|---|---|---|---|---|---|---|
| 1980 | 13.2 | 17.4 | 17.1 | 13.5 | -- | 6.6 |
| 1981 | 4.8 | -8.0 | 7.0 | 4.6 | -- | 13.1 |
| 1982 | 7.0 | 6.9 | 10.1 | 7.1 | -- | 25.4 |
| 1983 | 3.5 | 18.6 | 4.0 | 3.8 | 18.3 | 14.0 |
| 1984 | 9.8 | 21.2 | 5.3 | 9.9 | 32.4 | 19.8 |
| 1985 | n/a | n/a | n/a | 14.0 | 21.6 | 30.8 |
| 1984/85* Output: | | | | | | |
| thousand tons | 14,451 | 382 | 573 | 17,553 | 5,350 | 2,890 |
| kg per capita | 14.0 | .37 | .55 | 16.9 | 5.2 | 2.8 |

* NOTE: Individual pork, beef and mutton data are from 1984, while the total for all three meats and data for eggs and milk are for 1985.
SOURCES: State Statistical Bureau, **Tongji**, 5/86, p. 44; (J5CH01T.R5H).

Finally, it is interesting to note that the decline in grain output may actually have been desirable, given the very large harvest in 1984 and the State's inability to store and preserve it. Until commercial relations between grain surplus and deficit regions are more mature, there should be some doubt about the wisdom of pressing for larger grain harvests in provinces with no additional storage facilities. In this sense, the 1985 grain output decline could be viewed as a successful experiment in the use of prices to manipulate the structure of crop output. The fact that all crop output declined, however, adds credence to the argument that weather was important, because the reforms by themselves would have resulted in a shift of land to crops other than grain, virtually all of which have higher value yields than grain, increasing total crop output accordingly. Putting such hypothetical questions aside, however, the political significance of grain output has apparently overshadowed its moderate economic significance, and the performance of grain in 1986 will be watched very carefully.

Discounting the 1985 record because of these many circumstances, the importance of the long-term growth record needs to be stressed. Although crop diversification is the main cause of the strong long-run growth record, animal husbandry also plays a central role in the rural economy, and, except for village industry, is by far the largest non-crop subsector of agriculture. Growing 12 percent in 1984 and 16 percent in 1985, animal husbandry recovered from its slow growth in 1983, which was due largely to low pork prices and a shift of farm resources, especially in the easternmost provinces, into other activities. Although statistics on individual meat output trends are unavailable, all meat output in 1985 grew a very strong 14 percent, while egg output was up 22 percent and milk output up 31 percent. These are very strong records, especially in light of the high growth for the same sectors recorded in 1984.

In animal husbandry, output and investment patterns have shifted away from the pastoral regions of China to suburban farms and enterprises. This is particularly true for the dairy industry and the production of whole milk, of which there is a chronic shortage in all urban areas. Urban milk output has grown faster than output in other parts of China (for 1983, 19.5 percent as opposed to 14 percent nationwide). At the same time, meat demand has come to emphasize higher quality cuts of meat and lean meat. Fatty pork is reportedly very difficult to sell and there have been complaints that some cities are requiring that meat coupons be redeemed for fatty pork in spite of its low popularity. Both of these trends, emphasis on urban-based dairy and high-quality feed-lot meat production, represent a major shift in animal husbandry technology with important implications not only for consumption patterns, but also for feed grain demand.

Table 8-4
OUTPUT OF PORK, BEEF, AND MUTTON BY MAJOR WORLD PRODUCERS, 1982-85

| | 1982 | 1983 | 1985 Output | |
|---|---|---|---|---|
| | (Percent Growth) | | (mil. tons) | (kilo/ person) |
| CHINA | 7.1 | 3.8 | 14.0 | 13.8 |
| Argentina | -10.8 | -11.7 | 2.6 | 88.9 |
| Australia | 1.8 | -.9 | 2.3 | 149.4 |
| Brazil | 4.3 | 2.9 | 3.5 | 27.1 |
| W. Germany | -4.7 | 14.3 | 4.6 | 75.6 |
| Japan | 2.0 | 1.0 | 1.9 | 16.3 |
| United States | -3.9 | 5.1 | 17.7 | 75.5 |
| U.S.S.R. | -2.9 | 7.7 | 13.4 | 49.2 |
| Other Producers | .9 | 3.0 | 53.8 | 19.6 |
| WORLD TOTAL | -.03 | 3.8 | 114.0 | 24.6 |

SOURCES: State Statistical Bureau, **Statistical Yearbook of China**, various years, and FAO production yearbook. (J5CH25BT.R5H)

At present, however, much of animal husbandry output, which for China is overwhelmingly pork production, is small-scale family-based production. As such, it has been heavily influenced by the shift to private management. Fattening periods are shorter and dressed weights (pork per hog) increased from 53 kilograms in 1979 to over 60 kilograms in 1984. The fattening periods are still long by international standards (18 months as opposed to 12 in the U.S.), indicating that potential for sustained growth in output exists.

China's meat production is placed in international comparison in Table 8-4, above. China's meat output matches that of the Soviet Union and is only somewhat below output in the United States. On a per capita basis China's output is extremely low by world standards, roughly half the level for Brazil.

In addition to China's output trends, it is important to single out for special attention the continuation of the "phase two" rural reforms. There was some doubt in 1985 whether the new contract procurement system, under which farmers signed voluntary contracts for grain production, was permanent. The continuation and adjustment of the system in 1986 confirms that the reform is indeed a new step towards market economics in rural China. Furthermore, "phase two" in 1986 is going beyond contract arrangements to encourage and streamline commercial links between urban and rural areas. Adjustments of the grain contract system itself in many areas are encouraging increased peasant sales on the open market at higher prices than those guaranteed by state contracts. Finally, "commodity grain bases" specializing in grain for sale at rates higher than the 30 percent national average have been established in several provinces.

Even outside of "commodity grain bases," farmers are increasingly selling their output for further processing rather than consuming it themselves or selling it in its unprocessed form for direct consumption. As an example of foods used for manufacturing inputs, in 1984 twice as much grain was used in the food processing and brewery industries as in 1978. Furthermore, the growth in the food processing industry (9 percent in 1984) accelerates rural specialization, so that there is more commercial exchange in the rural areas themselves. Previously, commercialization in the rural areas consisted mainly of sales of rural agricultural products to urban areas.

Overall, there is continuity in China's major agricultural trends if weather is given the major responsibility for the 1985 crop output decline. If, on the other hand, reforms have been the principal source of destabilization, the 1986 record will be the best indicator of the severity of interference. In either case, the record in early 1986 confirms that ownership and marketing reforms in rural China are continuing and expanding into new areas.

## POLICY

The principal thrust of China's 1986 agricultural policy is to continue to expand the private commercial basis for rural production while at the same time working to solve particular problems, most notably the politically sensitive decline in grain output. These basic policy positions are adjustments of more long-range policies, first implemented in the late 1970s as the "household responsibility system" and significantly extended in 1985 with the "grain contract purchasing system."

1986 policies to strengthen commercial institutions and activities in rural areas have several dimensions, but in many cases bureaucratic control is still an important supplementary tool. One often-stressed policy promotes greater specialization in farm output, especially in quality grains. This shift, in turn, requires providing various subsidiary services for marketing the product and providing inputs. The policy of giving greater responsibility to county-level authorities to promote these services is intended to increase the number of marketing channels and reduce the power of marketing monopolies inherited from the earlier centrally-planned system.

Price adjustments in 1986, particularly steps to raise the effective price of grain and lower the price of fertilizer inputs, are also meant to stimulate the commercial "enthusiasm" of farmers. Commentators in the Chinese press have noted that under the new rural policies, the old bureaucratic mechanisms are no longer sufficient. One significant policy shift intended to strengthen market forces has targeted administrative mechanisms for the transfer of grain between surplus and deficit regions. This solution calls for more financial incentives for surplus regions and greater assumption of shipping and other costs by the deficit regions benefitting from the transfer.

Paradoxically, the strengthening of market forces often appears to require the application of additional direct bureaucratic controls. This is most apparent in policies designed to encourage 1986 grain production, following criticism of 1985's grain output decline. In some regions, local industry is being taxed to subsidize agricultural investment, so as to make grain cultivation more profitable. In others, small inefficient fertilizer plants are being reopened and subsidized to encourage greater fertilizer applications by profit-seeking peasants. Perhaps most significantly, grain prices for sales over the contracted "quota" have been raised to encourage farmers to plant more for sale to the state.

These various policies to strengthen market forces illustrate a basic strategy: the addition of supplementary indirect controls of one kind to compensate for the reduction or elimination of direct controls of another kind. Specifically, direct controls on output mix and procurement are being reduced or eliminated in favor of prices, profit incentives and markets to "let the peasants get rich." But to make the whole system work without traditional rigid control measures, new controls on prices, subsidies and marketing arrangements will have to be added. The policy trend is to reduce old direct controls and increase new indirect controls, with strengthened market mechanisms making up the difference. The policy goal is thus one of transition from central planning to market economics without major output or distribution disruptions.

While the strengthening of market forces is a more general policy position, correcting the 1985 decline in grain output is the most immediate official concern. The concern over grain is political in a double sense: first, influential critics of reforms can use the grain decline to bolster their attacks, and second, the reduction in grain output is largely a reduction in grain sold for urban consumption.

The policies to stimulate grain output were presented in "Document 1" for 1986, a January 1986 Communist Party Central Committee circular on agricultural policy. It has two major directives: first, incentives for grain production are to be adjusted in accordance with the varying conditions in four kinds of grain growing regions, and second, the transfer of grain from surplus to deficit regions is to be stimulated.

Measures to adjust incentives for grain production in four different kinds of regions are the most interesting. The first type of grain-growing area is that which also has a highly developed base of prosperous rural industry and sideline services. In these areas, localities are to be forced to transfer a portion of industry and sideline profits to grain cultivators, either as direct transfer payments or as indirect assistance in the form of infrastructure investment.

In the second kind of grain-growing area, where there are few industrial or sideline opportunities, Document 1 calls for a reduction in levels of grain contracted for purchase so that more may be sold at higher negotiated non-contract "market" prices. This policy is curious and raises an obvious question: why would farmers contract any grain at all with the state if the negotiated market price were higher than the contract price? The most straightforward conclusion is that farmers in these regions are not completely free to determine the level of contracted grain purchases. They have fewer options to grow alternative crops, and so will plant grain and sell part to the state regardless of the official arrangements. In other words, the wording of Document 1 in this case misrepresents conditions to a certain degree. The state is apparently guaranteeing to buy not only contract grain but also any grain for sale in addition to the contracted amount, at a higher price. The state is also dictating the level of contracted grain as a condition for guaranteeing the purchase of extra output at higher prices. Under these circumstances, a reduction in the contracted amount results in an increase of the effective average price the farmers receive for their grain.

In a third kind of grain producing area, where conditions are very poor, Document 1 calls for the purchase of all grain at "market prices," which are stated to be higher than contract prices. Finally, at the other extreme, in areas well-endowed with grain land, all grain should be purchased at lower contract prices, to "maximize peasant sales."

The policy steps in Document 1 are clearly a charade. They camouflage the basic state policy, which seeks to encourage grain production at the least expense to the state budget. The effective price of grain is manipulated by shifting the mix of "contract" and "negotiated" sales. In poor areas, a high average price is proposed to coax more commercial grain from farmers who would otherwise consume it all themselves. In grain-rich areas, where farmers are going to sell anyway, a low average price is proposed so that more grain sales are needed to earn a target income. In areas where farmers do not have to plant grain because of numerous other income-earning opportunities and where local government budgets can be made to subsidize grain output, they are ordered to do so. In short, every effort is made to maintain the perception of market and "contract" institutions, while in fact numerous central controls manipulate the results.

Grain is thus the most significant example of the basic Chinese policy of using new indirect controls to achieve desired ends while reducing the older, cruder command techniques. In the final analysis, the policy is a complex scheme to manipulate prices without appearing to do so.

In spite of their complexity, these most recent adjustments to China's on-going rural reform policies continue to emphasize the individual and private nature of the new agricultural system. The basic features of the reform policies are summarized below.

Under China's traditional agricultural system, each commune, brigade, team, and more recently, each household was assigned an output quota for delivery to the State at the quota price. Sales to the State over the quota were sold at various higher prices. Individual farmers had little if any control over what they grew.

The first phase of rural reforms, the household responsibility system, is over 5 years old and has essentially transformed rural China's production from a collective system to one based on private ownership. The new land ownership (or "responsibility") program was extended in 1983 and 1985 to include the nation's vast rangelands, promising eventual solution to widespread problems of overgrazing, soil erosion, and desertification. Finally, the land ownership transfer reforms were extended even further in 1985 by decollectivizing so-called state farms, farms with heavy government investment managed directly by the Ministry of Agriculture as showplace or pioneering rural production centers. All these steps confirm the fundamental policy of effective private ownership in the rural economy.

The second phase of China's rural reforms, first introduced in 1985, is the contract purchasing system, through which farmers have a degree of choice over what they produce and sell. Under the new contract procurement system, announced in the first "Document 1" of 1985, mandatory deliveries of output to the State were replaced by output deliveries specified in annual contracts to which the farmer and the State mutually agree. This arrangement further dismantled China's centrally-planned economic control mechanisms, further converted rural China to a commercialized, market-oriented economy, and in part made necessary the added complexity of the 1986 grain policies, because the freedom not to plant grain has in some areas dramatically increased the sensitivity of the rural economy to prices and price manipulations.

These then are the major agricultural policy directions as of early 1986. There are numerous subsidiary policies: promoting exports, allocating rural credit, slowing the loss of cultivated land, strengthening extension services, encouraging tractor production, and returning investment in irrigation to 1980 levels. But the fundamental strengthening of market mechanisms and institutions, and within that framework the efforts to promote grain output, deserve the greatest attention.

## PROBLEMS

China's greatest agricultural problem is the provision of grain to cities and other grain deficit regions as market institutions become increasingly pervasive in rural areas. A second related problem is the price and availability of high quality fertilizer. Both problems are fundamentally problems of price, with grain prices too low and fertilizer prices too high. These prices, in turn, reflect deeper problems of a more general nature.

China's grain problem is a combination of the shortage of arable land per capita, the low price of grain relative to other crops, and the shortage of foreign exchange for grain imports. With China's dense population, it would make the most sense for China to grow vegetables, fruits and other high value-yielding perishable crops while importing inexpensive grain from the world market. This has been the pattern for South Korea and Japan. Because China's foreign exchange shortage has limited this option, China is faced with the only alternative, a lower quality diet overall and the need to encourage grain surplus regions to continue to grow grain for shipment to cities and other grain poor areas, rather than shifting land use to alternative crops. Without direct Maoist controls, the final problem is one of how to subsidize the price of grain to extract the largest surplus from grain-rich areas. Significantly raising the retail price of grain in cities is politically unacceptable, and so the problem of grain price subsidies is the inescapable result.

The problem of fertilizer usage results from both the 1985 contract reforms and basic problems in the fertilizer industry. Fertilizer use and production declined dramatically in 1985, including the use of higher-quality imported fertilizer. The decline came largely because under the new grain contract purchase system, fertilizer was no longer distributed as compensation for grain deliveries and farmers were faced with high prices for mediocre fertilizer. Expensive poor-quality fertilizer, in turn, reflects China's backward fertilizer industry. Except for a few large modern plants, mostly imported in the 1970s, China's fertilizer is largely produced in small-scale plants operated at the local level. Many of these were apparently forced to close in 1985 as a result of the sharp decline in demand; restarting them in 1986 as part of the grain promotion campaign requires subsidies. Adding to the severity of the fertilizer problem is the heavy reliance on nitrogen fertilizers; phosphate and potassium fertilizers are in extremely short supply.

Although grain procurement and fertilizer supply are probably the most fundamental agricultural problems, other problems are also worth mentioning. There have been continual official complaints and other accounts in the Chinese press of the loss of land and labor to industrial sideline activities. There is reportedly a shortage of well-educated and experienced workers in agriculture, as a result of the lure of other jobs and of towns. The quality of labor, for tillage, care, and weeding, has reportedly declined. The problem has spread to rural party cadres, who are focusing attention more on town industry than on maintaining balanced crop output of high quality. Without more quantitative measures, it is difficult to evaluate these many reports, but they are bound to appear to some degree, and yield and output results for 1985 and 1986 will eventually provide relevant information.

It is also important to mention the problem of feed quality and availability for animal husbandry. Traditionally, China's livestock has relied upon foraging, eating what they could find. In the grasslands, the nutrient value of grass and hay has deteriorated, and other forms of fodder are poorly developed. For a modern animal husbandry industry, quality nutrition is essential, not only from grains and other specialized fodder crops, but also from feed additives, which China now imports in considerable quantity. China is only just beginning to address the problem of livestock feeds, which could prove to be a major restriction on the growth of quality meat and dairy product output.

A final fundamental problem is one of technology levels. With private tiller-owner agriculture now the rule in China, technology transfer to rural areas must rely on more traditional forms of extension work and education. These channels are poorly developed in China, although a network of agricultural colleges exists and forms the foundation of the emerging extension program. The early easy gains in farm productivity from the new ownership system cannot continue for long. The critical question is whether required technology transfer can occur to maintain the growth in productivity so apparent in the early 1980s.

## PROSPECTS

In the short term, barring serious weather failures, 1986 should be a year of output recovery for China's crops and continued strong growth for animal husbandry and other subsidiary forms of rural output. In particular, grain output will be up from 1985 levels, but not as high as output in 1984, since area planted to grain has increased only marginally. For other crops, the price reforms and marketing improvements in 1985 should bring significant increases in output and commercial sales.

In general, the intermediate- and long-term prospects for China's agriculture are excellent, because the owner-tiller environment will continue to generate adjustments to weather and technical conditions and at the same time inspire efforts to make the land more productive, either by different choices for cropping patterns, or because of attention paid to other products, in particular animal husbandry.

In the long run, output will continue to grow more rapidly than is usual for developing countries, but results may fall somewhat short of official projections. Emboldened by the success of the past few years, China's agricultural officials in 1985 began speaking of quadrupling agricultural output by the year 2000, relative to 1980, which is a much higher target than that announced in 1980, when all of industry and agriculture together were to quadruple in the same period. Quadrupling agriculture is not likely, but growth will be such that tripling is possible and even probable.

One major mechanism for this increase is the shift of planted land and rural labor out of traditional staple crops, such as coarse grains, and into other crops with higher value yields and into animal husbandry and sidelines which bring an even greater return to labor, the relatively plentiful resource.

The shift in cropping patterns is extremely important for maintaining China's rapid growth in agricultural value output. Some crops, such as fruits, vegetables, and certain industrial crops, have a much higher "value yield" (gross revenue per hectare), than staples and other traditional crops. Even if yields in staples grow slowly, and even if farm land is increasingly taken over for industry and housing, shifting the remaining land from lower to higher value-yielding crops will increase the average value yield for all planted land. Hence, in spite of land constraints and varying seasonal limits on yields for individual crops, total crop output in China, barring major weather disasters, can continue to sustain its remarkable growth rate of the past few years.

## CHAPTER NINE — Commerce and Prices

### EXECUTIVE SUMMARY

| | |
|---|---|
| TRENDS | * China's long-term rapid commercialization has continued to match overall economic trends, booming to mid-1985 before slowing dramatically by early 1986.<br>* In spite of the general slowdown, private sales continue to grow.<br>* Inflation as high as 30 percent in 1985 moderated somewhat through early 1986, as relative price adjustments continued. |
| POLICY | * New emphasis has been added in 1986 to official encouragement of "horizontal" commercial transactions.<br>* 1986 is officially a period of "consolidation" in price reform, but shifts continue in industrial and farm pricing. |
| PROBLEMS | * Commercialization's major problem is the domestic system of retail prices, which seldom reflect demand or costs.<br>* State leaders implementing price reform must avoid political disruption by managing the inevitable inflation accompanying reform. |
| PROSPECTS | * Commercialization of the economy will continue and even accelerate, due to fundamental underlying factors.<br>* Inflation will moderate in 1986 as the economy recovers, but will grow serious again by early 1987. |

### TRENDS

The rapid growth of commercial transactions in China continued into 1985 before slowing somewhat as overall economic growth declined in the autumn and winter of 1985-86. In spite of the slowdown, however, the continued increase in transactions of all kinds confirms that China's economy is becoming rapidly monetarized, after decades of Maoist emphasis on self-sufficiency. The increase in commercial activity during 1984-85 was exaggerated by the relatively high level of inflation by Chinese standards, but even after considering inflation, growth in wholesale and retail business is an indicator that fundamental reforms in China's economy are also reflected in the commercial sectors.

The rapid expansion in commercial activity is best seen in Table 9-1, below, which shows not only double-digit growth of retail sales overall, but also how growth of sales by collectives and individuals has far outstripped sales by state-owned units. Acceleration of sales in 1985 makes the process even more remarkable. Retail sales overall grew 27.5 percent in 1985, and sales by individuals, which have virtually doubled every year since 1980, grew 110 percent in 1985.

Two qualifications of the commercial record are needed: there was a slowdown in state commercial activity in the second half of 1985, and price inflation, as high as 30 percent for a few months in rural fairs, reduced the "real" significance of the monetary increases recorded in Table 9-1.

The commercial slowdown in the second half matches the overall slowdown in industrial production and the slower growth of farm output at 1985 harvest time. The slowdown, however, is not apparent from annual data, and even comparison of end-year figures with the record in mid-1985 shows that only the growth rate for sales by state-owned units slowed. Monthly data, however, show a general slowdown in sales for all units, although it was much more severe for state-owned enterprises, especially during the last three months of 1985.

Table 9-1
RETAIL SALES

| Year | Total Retail Sales | State Owned | Collectively Owned | Jointly Owned Ventures | Individual | Peasants to Non-peasants |
|---|---|---|---|---|---|---|
| | (Growth Rate) | | | | | |
| 1980 | 18.9 | 13.1 | 61.8 | N/A | 248.8 | 45.3 |
| 1981 | 9.8 | 4.6 | 32.5 | 175.0 | 149.3 | 29.6 |
| 1982 | 9.4 | 4.7 | 21.3 | 45.5 | 99.5 | 23.9 |
| 1983 | 10.9 | 4.4 | 14.4 | 125.0 | 147.3 | 20.0 |
| 1984 * | 18.5 | 14.9 | 12.4 | 111.1 | 75.4 | 27.8 |
| 1985 | 27.5 | 13.6 | 18.0 | 84.2 | 108.8 | 70.6 |
| | (Billion Yuan) | | | | | |
| 1985 | 430.5 | 174.7 | 157.8 | 1.40 | 67.6 | 29.0 |

* NOTE: The definition of State and Collective Enterprises changed in 1984. Growth rates are calculated based on consistent definitions.

SOURCES: State Statistical Bureau **1985 China Statistical Yearbook** and **Tongji** March, 1986, p. 48. (j6bi06s.n6e)

The most remarkable trend shown in Table 9-1 is clearly the very rapid growth in sales by privately-owned enterprises. Monthly data show that by the end of 1985, these sales were roughly 16 percent of all sales, compared to 1.6 percent in 1981, a ten-fold increase in four years. Furthermore, in the late-1985 slowdown, private sales were much less affected than either state or collective sales.

The rapid growth of private commercial establishments is reportedly putting pressure on state and collective enterprises to provide better-quality products at more competitive prices. In some cases sales by state stores have been dramatically reduced. Pork sales by state stores fell from 77 percent of the total in 1984 to 47 percent in 1985. For egg sales, the state share fell from 40 percent to 23 percent, and for vegetables from 51 percent to 26 percent. In some extreme cases state establishments have reportedly shut down altogether and leased their premises to private traders.

Although most of the attention paid to China's commercial renaissance focuses on urban transactions, the increased reliance on markets and money transactions is perhaps equally dramatic in rural areas. By the end of 1985, more than 61,000 free markets were registered, an increase of 5,000 compared to 1984. These markets reported a 1985 turnover of 63 billion yuan, a 38 percent increase over 1984. Of these sales by peasants, 12 billion yuan were sales in cities, while a full 51 billion yuan were sales in rural fairs among peasants, a 34 percent increase over 1984. In short, the commercialization of

China's economy is as significant for the rural economy as for the urban economy.

The pace of rural commercialization through 1984, the last year of direct state procurement of grains, is presented in Table 9-2, below, which shows how sales at the traditional list price plummeted from 85 percent of the total in 1978 to 34 percent at the end of 1984. At the same time, the share sold at above-quota prices quadrupled while sales at other "free market" prices tripled in volume. Although the new system of contracted grain sales to the state have superceded the older multi-tiered system, the data in Table 9-2 show that commercialization in rural procurement sales, as well as retail sales, has been going through a steady transformation throughout the reform period.

Table 9-2

VOLUME OF FARM AND SIDELINE SALES BY PURCHASING PRICE 1978-84

| | Total Value | List Price | Above-Quota Price | Nego-tiated Price | "Free" Market Price |
|---|---|---|---|---|---|
| (Billion Current Yuan) | | | | | |
| 1978 | 55.79 | 47.24 | 4.42 | 1.02 | 3.11 |
| 1979 | 71.36 | 51.17 | 11.94 | 3.50 | 4.75 |
| 1980 | 84.22 | 54.22 | 15.10 | 8.00 | 6.90 |
| 1981 | 95.50 | 55.56 | 20.00 | 11.00 | 8.94 |
| 1982 | 108.30 | 62.22 | 22.50 | 12.50 | 11.08 |
| 1983 | 126.50 | 60.70 | 35.50 | 17.00 | 13.30 |
| 1984 | 144.00 | 48.78 | 48.39 | 20.70 | 26.13 |
| (Percent of Total) | | | | | |
| 1978 | 100.0 | 84.7 | 7.9 | 1.8 | 5.6 |
| 1979 | 100.0 | 71.7 | 16.7 | 4.9 | 6.7 |
| 1980 | 100.0 | 64.4 | 17.9 | 9.5 | 8.2 |
| 1981 | 100.0 | 58.2 | 20.9 | 11.5 | 9.4 |
| 1982 | 100.0 | 57.5 | 20.8 | 11.5 | 10.2 |
| 1983 | 100.0 | 48.0 | 28.1 | 13.4 | 10.5 |
| 1984 | 100.0 | 33.9 | 33.6 | 14.4 | 18.1 |

SOURCES: State Statistical Bureau official data.

It should be mentioned at this point that "free" markets are not entirely free, because all prices are monitored by state agents and significant deviations from acceptable norms are rather strongly discouraged.

The old procurement system, in spite of its rapid transformation, was still a mandatory crop delivery system. A somewhat more voluntary, contractual, system has been implemented since early 1985. Presented in what is known as "Document One" for 1985 and supplemented by a second "Document One" in 1986, contract reforms end the more than 25-year old Maoist policies of required crop sales to the state. In their place, individual contracts for delivery of output at agreed-upon levels and prices have been substituted. For a more thorough discussion of agricultural reforms, see Chapter 8.

For both rural and urban commerce, one area for which there is little official statistical data is the commercial relations between enterprises. Yet, what information there is describes the rapidly increasing role of "horizontal" transactions between enterprises for scarce materials. For many materials, in particular energy and metals, there is competition for deliveries, and increasingly state enterprises, which traditionally received priority in supplies, are missing deliveries and complaining about non-fulfillment of traditional contracts. The main issue is price. Other purchasers are offering premium prices, and sellers are finding ways to accommodate their needs before those of state enterprises.

A horizontal marketing network is also forming for manufactured consumer goods. For example, Shanghai -- a city which usually supplies goods to other cities -- is now a major purchaser of consumer goods from other areas. The volume of consumer goods purchased elsewhere by Shanghai's two major department stores was 150% higher in 1985 than in 1984.

Finally, commercial trends in China have included shifts in consumer demand patterns. The growth in demand for foodstuffs has shifted from staples to non-staples; and within staples from coarser to finer grains. Chinese consumers are placing a greater emphasis on nutritional value, ease of preparation, variety, and quality in food purchases.

In consumer manufactures, demand has shifted from necessities to luxury goods; freezer sales increased 550 percent in 1985 over 1984. Consumer durables purchases reflect an interest in chore reduction and enrichment of material life. The four status symbols of the Maoist period -- bicycles, wristwatches, sewing machines, and radios -- have been replaced by televisions, video cassette recorders, washing machines, and refrigerators. All of these consumer preferences reinforce calls for greater quality control for consumer, agricultural, and industrial products, and for the production of more high-quality goods and fewer low-quality goods. Experimental price reforms in Shenzhen have already explored the effect of price differentials for high and low-quality meats, and these differentials will become increasingly commonplace as suppliers have more freedom to set prices for quality goods demanded by consumers.

As much of the discussion above indicates, the commercialization of China's economy is closely linked to prices and price changes. 1985 was a major year for adjustments in what is universally regarded as an irrational price system not representative of relative scarcity values. Many staples and basic materials, such as energy, are low-priced and rationed or in short supply. Others, in particular manufactures considered to be luxuries, are sold at very high prices and have voluminous unsold inventories. In addition, there is little, if any, price differentiation for quality differences.

Under the pressure of commercial transactions, 1985 price changes began to accelerate adjustments already begun in earlier years. Because prices in general rise more easily than they fall, the result was significant inflation in 1985. At the same time, official price changes, especially in foodstuffs sold to urban populations, have added to the inflationary trends reported nationwide.

Tables 9-3 and 9-4, below, give price data both in historical perspective and on a monthly basis for 1985-86.

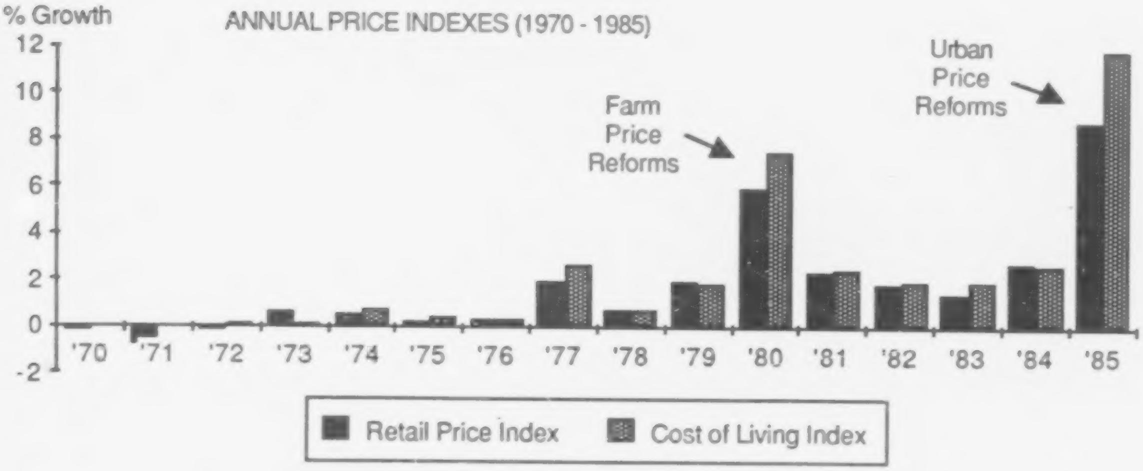
Table 9-3
PRICE INDICES
(Percent Growth)

| Year | Retail Price Index | Cost of Living Index |
|---|---|---|
| 1975 | .2 | .4 |
| 1976 | .3 | .3 |
| 1977 | 2.0 | 2.7 |
| 1978 | .7 | .7 |
| 1979 | 2.0 | 1.9 |
| 1980 | 6.0 | 7.5 |
| 1981 | 2.4 | 2.5 |
| 1982 | 1.9 | 2.0 |
| 1983 | 1.5 | 2.0 |
| 1984 | 2.8 | 2.7 |
| 1985 | 8.8 | 11.9 |

SOURCES: State Statistical Bureau March communique on 1985 plan fulfillment and **Monthly Statistical Bulletin** (in Chinese), various issues. (J5CBC02S.T5J)

It is important to note that Chinese data on prices, especially prices in rural markets and fairs, are probably of poor quality, because of the lack of Chinese familiarity with random sampling techniques. Additionally, many of the most significant price increases have occurred in unofficial transactions and hence are under-reported in overall average price indexes. It is not clear, therefore, how much various published price data deviate from what random sampling would show. Given widespread reports of black market activities, it is very likely that price increases in 1985 are considerably higher than those reported in official statistics.

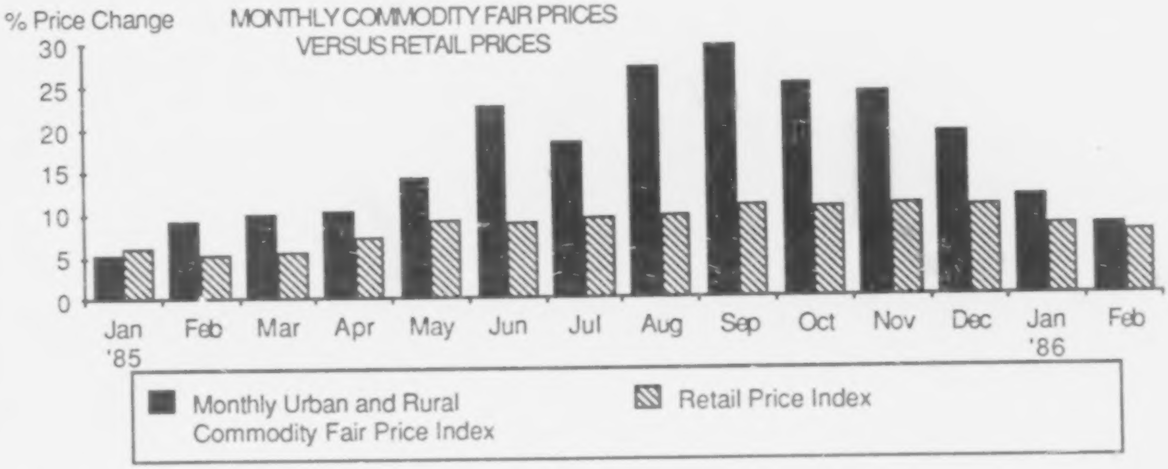
Diagram 9-1



Nevertheless, data in Tables 9-3, 9-4, and 9-5 show that 1985 was a year of relatively rapid price increases which then slowed towards the end of 1985 and in the beginning of 1986.

The data in Table 9-3, above, indicate just how low official inflation has been in China. The one recent exception was in 1979-80, at the time of major rural price reforms associated with rural land reform begun at that time. 1985 was a second period of price inflation, but in industrial goods as well as rural goods, again coinciding with major reforms, this time in industry and the urban economy.

Diagram 9-2



Monthly data in Table 9-4, below, present the most volatile price series for which official data are available. Price inflation in "urban and rural commodity fairs" is the closest trend to "free market" prices in China, and the monthly data below show that inflation peaked in September at roughly 30 percent. The same price series shows, however, that by early in 1986 this measure of inflation had been slowed dramatically, to less than 9 percent.

Urban household survey data in Table 9-5, below, also show relatively rapid rises in average prices for major non-staple foods purchased in 1984-86. The growth rates are calculated relative to the same quarter in the previous year, but it should be made clear that these growth rates are for unit values and not prices of goods controlled for quality. As a result, a higher average value per kilogram for beef, for example, could indicate increased purchases of higher quality cuts rather than an increase in the price of the same quality meat. But the increases in unit value shown in Table 9-5 are so high in some cases, and the products relatively homogeneous (milk, eggs), that the information confirms a period of rapid inflation in 1985.

An additional caution about the data in Table 9-5 is that the increases are measured over the same quarter in the previous year, so that a one-time increase in prices will show up for that quarter and the following three quarters as well. This is clear in the case of poultry when the price apparently rose sharply in early 1985. High rates for the rest of the year merely show that poultry prices stayed at the new higher level relative to the previous year.

Table 9-4
CONSUMER DURABLE PRICE INFLATION IN URBAN AND RURAL COMMODITY FAIRS
(Percent growth over same month in previous year)

| | | |
|---|---|---|
| 1985 | Jan | 5.2 |
| | Feb | 9.1 |
| | Mar | 10.1 |
| | Apr | 10.4 |
| | May | 14.4 |
| | Jun | 22.7 |
| | Jul | 18.5 |
| | Aug | 27.3 |
| | Sept | 29.8 |
| | Oct | 25.1 |
| | Nov | 24.0 |
| | Dec | 19.2 |
| 1986 | Jan | 11.8 |
| | Feb | 8.5 |

SOURCE: State Statistical Bureau, **Monthly Statistical Bulletin**. May, 1986, page 80. (j6bcc04s.n6f)

For some products, prices clearly rose most dramatically in early 1985, but others, such as fresh milk and eggs, reflect new bursts of inflation very late in the year. In the case of these two foods, the increases were expected to some degree, because one reason for the shortage of milk was its very low price, while for eggs, demand had increased very rapidly earlier in the year as higher prices for meat and fish influenced a shift to eggs as a cheaper alternative source of protein.

Table 9-5
GROWTH IN PRICE (UNIT VALUE) OF MISCELLANEOUS FOODS
(Percent inflation over price in same period in the previous year)

| Time Period | | Pork | Beef & Mutton | Poultry | Fresh Eggs | Marine Foods | Fresh Milk |
|---|---|---|---|---|---|---|---|
| **1984** | **I** | **4.13** | **11.03** | **3.67** | **.06** | **10.37** | **.16** |
| | II | 5.11 | 19.38 | 5.33 | -.85 | 8.84 | .94 |
| | III | -.84 | 5.59 | 5.87 | -1.92 | 12.95 | 9.92 |
| | IV | 5.85 | 9.75 | 7.50 | 1.20 | 13.87 | -3.00 |
| **1985** | **I** | **11.38** | **19.86** | **21.60** | **2.67** | **36.99** | **-10.24** |
| | II | 25.28 | 9.11 | 19.23 | 1.47 | 41.47 | 3.43 |
| | III | 29.10 | 50.04 | 23.40 | 16.97 | 45.60 | 4.72 |
| | IV | 27.94 | 80.03 | 13.09 | 17.63 | 27.14 | 29.89 |
| **1986** | **I** | **21.36** | **32.66** | **5.73** | **9.48** | **17.58** | **19.66** |

SOURCES: State Statistical Bureau, **Monthly Statistical Bulletin**, June 1986, p. 80 (J5CBC01T.B5J)

Overall, then, commercial activity in China is growing very rapidly and emphasizing non-state institutions, with the most rapid growth in retail sales coming from individually owned enterprises. An important part of this commercial explosion is the widespread program of price adjustments underway in retail, rural, and industrial materials markets. Better data are needed for a more complete understanding, but what information there is indicates that China has embarked on a major drive to commercialize its economy and adjust prices so they can play their necessary role. Price adjustments, in turn, imply inflation, and hence 1985 was a year of both price adjustment and rapid general price rises.

## POLICY

Chinese commercial and pricing policy through the first half of 1986 has the over-arching purpose of encouraging commercial expansion, especially in the private sector, while controlling inflation and ensuring the availability of goods at stable prices.

The official emphasis on strengthening the market economy, adjusting prices, and making enterprises responsible for their own profits has been confirmed for several years from the highest leadership levels. With the presentation of the Seventh Five Year Plan (1986-90), additional importance has been attached to the growth of private-sector commercial establishments. The encouragement takes many forms, including promotion of ownership shifts from state to cooperative and even individual control, and increasingly easy permission for opening private shops. In 1976, at the time of Mao's death, China had 400,000 private enterprises; by early 1986 there were over 11 million.

In addition to the major policy theme of open encouragement for commercial operations, there are numerous subsidiary policies: improving the mix of goods available, their quality levels, and the efficiency of the commercial system by investing in wholesale marketing channels, as well as a general reduction of excess demand for goods in short supply. Efforts to improve supply and product quality include closing small inefficient plants which produce poor quality goods at high cost and, in the process, use scarce resources which could otherwise be used for higher quality products.

These various policies dovetail with the fundamental policy direction of the past five years: rural and urban economic reforms which by 1986 have transferred virtually all farmland, including grasslands and state farms, to individuals and begun to pass control of industrial enterprises to on-site managers. (For more information on these reforms, see Chapter 3 on Industry and Chapter 8 on Agriculture). The importance of these ownership and control transfers lies in the powerful incentives they introduce to buy and sell commercially rather than trusting the cumbersome and undependable plan allocation process. These shifts are the driving force behind much of China's commercial expansion.

One major reason why both central and local government policies continue to encourage private shops in cities and towns is that new service establishments are absorbing excess labor. At the same time, farmers increasingly are being given permission to come into urban areas to sell their produce and other goods. Additionally, the very rapid urbanization underway in China is bringing rural populations into urban areas permanently, where their lives become much more closely related with the nation's money economy. All of these steps are supporting the use of money and markets, in both urban and rural settings.

The greatly increased commercial activity between decentralized shops and individuals is putting greater importance on prices, and the clear policy, again promoted from the highest leadership levels, is to adjust prices so they better reflect demand and costs.

Price reform, however, is difficult to carry out, largely because of the impact rapid inflation might have on urban political stability. In fact, increased commercialization is a basic part of price reform, because the introduction of individual and profit incentives makes almost irresistible the natural power of exchange relationships to raise prices of scarce goods and services. The Chinese are discovering this phenomenon. Therefore, together with their programs to introduce price shifts, official policy-makers are also making considerable efforts to police and discipline price rises considered to be excessive or poorly timed. The combination of these two forces, relaxation and discipline, continue to govern price reform in 1986.

Officially, 1986 price policy emphasizes a slowing down of price shifts, to allow the ambitious price reforms of 1985 and the related inflation to settle. A State Council circular released early in 1986 proposed "consolidation, digestion, supplementation, and perfection" for price reform. Nevertheless, price adjustments are continually being announced, and it is clear that although there may be no major price shifts in 1986, reform is expected to continue.

Within this framework, a very high policy priority is limiting the adverse impact of price reforms on urban standards of living Additional price monitoring stations have been set up in towns and cities. The purpose is to prevent market forces from working so well that urban supplies of foods and necessities at traditional prices are insufficient.

## PROBLEMS

There are essentially three major problems facing China's commercial and price reform policy-makers. First, the output mix of goods does not match consumer demand patterns because traditional prices give the wrong signals to producers. Second, relaxation of prices to allow corrective adjustments risks explosive inflation because of the very large amounts of money held by individuals in the form of both savings and cash. Third, price reforms which raise farm prices also raise urban price subsidies; there is no quick solution to what is essentially a fundamental imbalance between urban and rural standards of living when political power is centered in the cities.

Chinese policy-makers continually refer to the inability of the product mix to satisfy consumer tastes. The problem is usually treated as one of insufficient attention paid to quality products, too much attention paid to output of large quantities of poorer products, and wasteful use of scarce resources. In this way, the problem is addressed by referring to symptoms rather than the cause, which is irrational prices. Prices of low and high quality goods are often very similar. Reductions in the price of lower quality goods automatically means reduced profits for enterprises, increased subsidies, or closings. Price increases for high quality goods is inflationary. Hence, the first fundamental problem of commercial reform in

China is price reform itself.

The issue of inflation is the major problem facing price reformers. This problem is particularly acute because inflation has been repressed in China's economy for so many decades. Money incomes and money in circulation has in the past had little if any effect on prices, which were set for accounting purposes. Sales of goods in short supply were controlled by a ration system with ration coupons. As a result, tremendous purchasing power in the form of savings and cash holdings built up. If prices are truly to govern consumer choices, something must be done to absorb this purchasing power. A short-term solution is to maintain price monitoring for major consumer goods. A longer-term solution is the correction of skewed relative price differentials, coupled with productivity increases which raise output levels. The desired result is a balance between goods supply and money supply. Such a balance could be achieved through inflation or through rapid increases in output. To achieve the short-term solution, price monitoring and controls will be necessary for some time to come.

The problem of excess purchasing power is clear in both the consumer goods market and the investment goods market. It is amusing to read official exhortations calling for a reduction in consumer goods' inflationary pressures by channeling the funds into uses for "industrial development," when at the same time other officials are stressing the need to reduce the level of investment funds directed into industry and construction. The fundamental problem is that of too much money in circulation, and the resulting problem is inflationary pressure which will remain for a long time to come.

Finally, the problem of urban price subsidies is also likely to last many years. Historically, the Chinese government has indirectly subsidized urban consumption of foodstuffs produced in rural areas through resale programs. Two major periods of rural price increases have been 1979-80 and 1985; the purpose of policy directives in both periods is to stimulate farm output. At those times, related increases in urban food prices necessitated direct income subsidies to urban dwellers. There is no easy way to solve the problem of price reform and increased urban subsidies, because subsidies must be paid out of taxes on industrial goods, taxes which will either dampen urban wage increases or raise the price of manufactured goods. Either option, lower subsidies requiring lower tax increases, or greater subsidies requiring greater tax increases, predicates a lower urban standard of living relative to new rural standards of living. This is politically sensitive and difficult given the concentration of people in major cities. The ultimate solution is to raise industrial productivity, so that more consumer goods of higher quality are available for the same industrial wage bill. In that case, higher profits and higher urban wages from sales to rural consumers will allow a phase-out of price subsidies. Again, however, this solution will not come quickly, and in the meantime the problem of urban price subsidies will persist.

## PROSPECTS

Overall, the prospects for 1986 suggest continued commercial expansion and moderate inflation through late in the year, when more rapid industrial growth and the possibility of a good harvest may cause renewed price rises. Price reform will continue in numerous smaller adjustments reflecting quality differentials, but there will be no major price adjustments comparable to those in 1979 or 1985.

Prospects for continued commercial expansion are supported by several basic underlying facts about China's current economic development: the rapid urbanization of the population, the underlying egalitarian asset distribution in rural areas, the good prospects for increased managerial decentralization in industry, and the overall rapid pace of industrial growth. Official Chinese estimates foresee a 16 percent growth in commercial transactions for 1986 overall.

China's population could be more than 50 percent "urban" by 1988 or 1989. It is unclear the degree to which statistical urbanization does in fact reflect actual changes in population life styles and commercial dependence, but the evolution of the population structure is clearly accelerating in an urban direction. Towns and cities are centers of commerce, and as China's rural population leaves the family land to arrangements of shared management and moves to cities, the level of commercial participation nationwide will continue its very rapid rise. Because the recent rural reforms have given households their own lands and herds, peasants who have migrated to urban areas will not be impoverished. Rather, the new urban populations will have assets and family sources of income, unlike urban populations in so many poor countries. These factors indicate a strong potential for the gradual emergence of an urban middle class and active commercial development.

In industry, as a result of continued experimentation with individual enterprise management, and the determination of national leadership in carrying out urban reforms, continued decentralization of industrial decision-making is virtually certain. In this environment, competition for inputs, capital, and markets should continue to expand "horizontal" industrial commercial relations and at the same time force price changes in directions reflecting scarcity and usefulness.

Although inflation in 1985 was high by historical Chinese standards, 1986 will probably see a slow-down in the rate of increase. Major reasons for this conclusion include the slowdown in industrial growth in general, better control over the money supply following 1985's bank reforms, and the smaller 1985 harvests, since agricultural procurements are a major vehicle for introducing currency into the economy. Price adjustments will continue for the foreseeable future, but the degree of their success in becoming accurate guides for decentralized decision-makers is still uncertain. Regardless of their success and methods, they remain a critical question for the overall success of the urban and industrial reform movement.

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# CHAPTER TEN — Transport

## EXECUTIVE SUMMARY

**TRENDS**

- Total transport volume grew 15 percent in 1985, more than matching the pace of overall economic growth.
- Passenger air transportation grew 40 percent in 1985 for the second year in a row.
- Highway transport shows the greatest promise of easing the short-haul transport bottleneck.

**POLICY**

- State investment programs and enterprise decentralization are the major policy tools used to solve the transport problem.
- Investment in highways and rail roadbeds stresses upgrading old lines rather than opening new ones.
- Some ports are being placed under direct administrative control of the cities themselves.

**PROBLEMS**

- Transport investment is seriously inadequate, especially when China's transport shortage is considered in international perspective.
- Accidents, poor road quality, shortage of right-of-ways, low quality vehicles, and fuel shortages all contribute to the urgency of China's transportation system crisis.

**PROSPECTS**

- Growth in transport supply will be far slower than required, largely because of inadequate investment.
- The highway system should improve dramatically by 1990, however.

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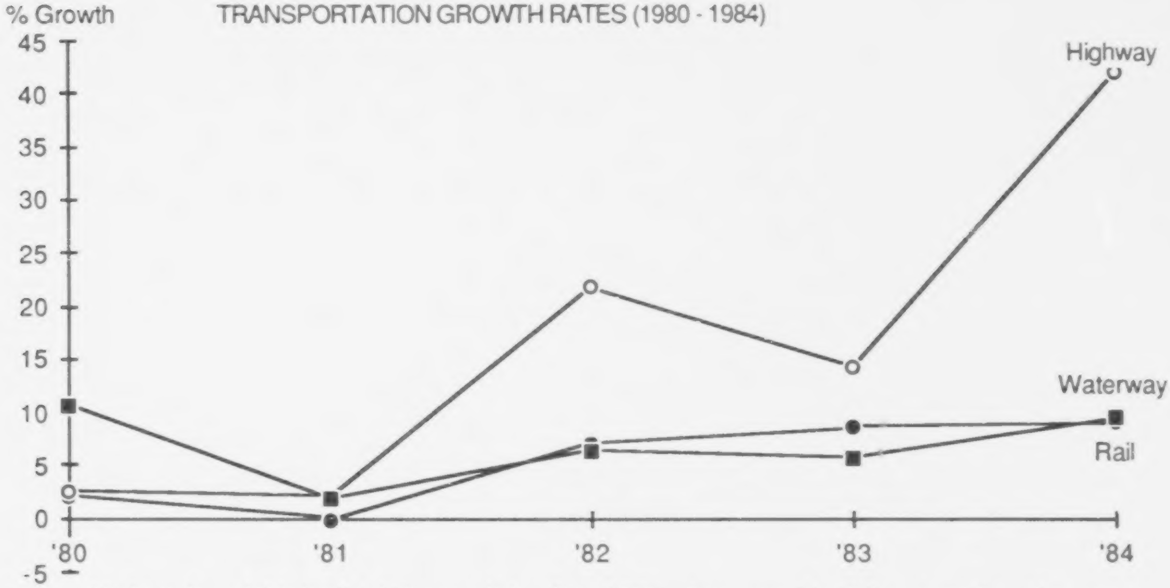
## TRENDS

Domestic transport in 1984 and 1985 experienced very rapid growth, helping to mitigate the severity of China's transport shortage. While the transport sector is no longer the critical constraint on China's economic development that it was in the early 1980s, it remains a bottleneck for the movement of coal from mine to user, for the shipping of agricultural and light industrial products from rural to urban areas, and for the delivery of imports and exports. Growth in transport volume has not kept pace with overall industrial growth over the past five years, although the gap was narrowed in 1985.

Following strong growth in all transport sectors in 1984, total transport volume in 1985 was up 15 percent, nearly matching the dramatic industrial acceleration. Rail freight grew 12 percent, while water transport grew even more rapidly, 20 percent over 1984. Growth rates in individual transport subsectors for freight and passenger carriage are given in Table 10-1 below.

Railways in China continue to carry the largest share of freight traffic of any country in the world and dominate all long-distance travel, although the share of total freight transported by rail was reduced from over 80 percent in 1950 to just under 50 percent in 1985. Only the USSR has a lower share of road transport, because of heavy pipeline usage. Movement of coal and timber is largely by rail and accounts for over 40 percent of all freight transport, due to the remote location of these resources. Commercial timber is found solely in the northeast. Similarly, despite coal deposits in almost every province, the most accessible and highest quality coal is located in the north and northwest, especially in Shanxi, far from coastal industrial centers. Furthermore, coal production could become increasingly concentrated; coal from Shanxi and Inner Mongolia is expected to account for 60 percent of output by the year 2000. Railway passenger traffic has grown rapidly in the past two years, largely in response to relaxed controls on individual travel which have coincided with urban reforms. Total passenger carriage is dominated by the rail subsector (as is the case with freight), with nearly 60 percent of all person-kilometers over the last five years logged on railways.

Diagram 10-1



Although published highway data for 1985 show negligible growth, these data only include freight carried by vehicles under the highway transport department (which represented less than one-quarter of highway freight volume in 1984). The 1984 record of growth in excess of 40 percent, including private transport, was probably repeated in 1985, considering the rapid growth in rural industry and the increase in 1985 vehicle imports. Therefore, while still relatively small in overall tonnage, highway freight is the fastest growing subsector in China's transport system.

Growth in highway transport and the number of vehicles which are used primarily for short hauls highlights both a major fault of China's planned economic system and illustrates how the reforms may allow private incentives to correct shortcomings. Under command planning, distribution problems tend to attract solutions based on engineering rather than economics. Expensive inter-provincial transport projects are promoted which link regions with obvious complementary specializations. At the same time, much more affordable local transport systems, exploiting less striking but perhaps equally significant intra-provincial and local sources for gains from trade, have traditionally been neglected.

Similarly, growth in the number of private shipping lines along the Yangtze river waterway network, which carries 80 percent of China's inland waterway freight volume, also suggests more responsiveness to local needs and potential profits. The majority of water transport volume is still handled by the Ministry of Communications. However, private shipping grew 50 percent in 1984 and rapidly again in 1985, although the exact rate is not yet known. Private ownership of boats along the Yangtze has also increased from none prior to 1979 to 173,000 in early 1985, and to 230,000 by the end of that year. Privately owned boats are operated by more than 800 shipping companies.

Table 10-1
CARGO AND PASSENGER TRANSPORT, 1981-1985

| (Item) | (Units) | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| Cargo Transport Volume | | | | | | |
| | ....(billion ton-kilometer) | 1,162 | 1,240 | 1,330 | 1,451 | 1,667 |
| | ...........(percent growth) | .9 | 6.8 | 7.2 | 9.2 | 14.9 |
| by Railway | | | | | | |
| | ....(billion ton-kilometer) | 571 | 612 | 665 | 725 | 813 |
| | ...........(percent growth) | .0 | 7.1 | 8.6 | 9.1 | 12.1 |
| by Highway | | | | | | |
| | ....(billion ton-kilometer) | 25.3 | 30.3 | 33.5 | 35.4 | 35.5 |
| | ...........(percent growth) | -.8 | 19.8 | 10.6 | 5.7 | .3 |
| by Waterway | | | | | | |
| | ....(billion ton-kilometer) | 515 | 548 | 579 | 634 | 757 |
| | ...........(percent growth) | 1.9 | 6.4 | 5.7 | 9.5 | 19.5 |
| by Air | | | | | | |
| | ....(billion ton-kilometer) | .17 | .20 | .23 | .34 | .42 |
| | ...........(percent growth) | 21.4 | 17.6 | 15.0 | 47.8 | 22.1 |
| by Pipeline | | | | | | |
| | ....(billion ton-kilometer) | 49.9 | 50.1 | 52.4 | 57.2 | 61.2 |
| | ...........(percent growth) | 1.6 | .4 | 4.6 | 9.2 | 7.0 |
| Cargo Handled at Major Seaports | | | | | | |
| | .............(million tons) | 219 | 238 | 250 | 275 | 311 |
| | ...........(percent growth) | N/A | 8.4 | 5.0 | 10.4 | 12.9 |
| Passenger Transport | | | | | | |
| | (billion person-kilometers) | 250 | 274 | 310 | 362 | 425 |
| | ...........(percent growth) | 9.6 | 9.8 | 12.8 | 17.0 | 17.3 |
| by Railway | | | | | | |
| | (billion person-kilometers) | 147 | 158 | 178 | 205 | 242 |
| | ...........(percent growth) | 6.5 | 6.9 | 12.8 | 15.2 | 18.1 |
| by Highway | | | | | | |
| | (billion person-kilometers) | 84 | 96 | 111 | 134 | 154 |
| | ...........(percent growth) | 15.1 | 14.9 | 14.7 | 20.9 | 15.4 |
| by Waterway | | | | | | |
| | (billion person-kilometers) | 13.8 | 14.5 | 15.4 | 15.4 | 17.2 |
| | ...........(percent growth) | 7.0 | 5.1 | 6.2 | .0 | 11.7 |
| by Air | | | | | | |
| | (billion person-kilometers) | 5.0 | 6.0 | 5.9 | 8.3 | 11.7 |
| | ...........(percent growth) | 25.0 | 20.0 | -1.7 | 40.7 | 41.0 |

SOURCES: China's State Statistical Bureau, **Statistical Yearbook of China**, various years. 1985 data from the SSB March 1986 communique on plan fulfillment.

The recent growth in private traffic on highways and inland waterways may mean that incentive reforms are correcting for the old bias against short haul transport. Five years ago vehicles under the state highway department transported 33 percent of highway freight volume. In 1984 they accounted for only 21 percent of the total, due to the expanded role of non-state vehicles. Although a similar time series is not available for passenger transport, the establishment of local bus companies and the emergence of private vehicles indicate a growing dependence on highways for short distances. Roads now carry 70 percent of inter-city passengers but still only 31 percent of China's total passenger-kilometers. Employment in private transport businesses rose more than 40 percent in the first half of 1985 over the end-1984 level. As of February 1986, there were reportedly roughly 290,000 vehicles operated by individuals and cooperatives which represented a 400 percent increase over 1983 (and surpassed the total number of vehicles under government-sponsored transport departments).

Air transport, which constitutes the smallest segment of China's transport system, continued to grow rapidly in 1985. Passenger transport growth matched the 1984 record of 41 percent, while air freight grew more slowly than in 1984: 22 percent, down from 48 percent. The Ministry of Aviation has been expanding and modernizing China's fleet of civilian aircraft by promoting domestic research, development and technology transfer for the long-term, and by increasing imports of aircraft to meet current needs. Imports of air transport equipment were up 250 percent in value terms in 1985. New, non-military passenger aircraft was the United States' largest single commodity export in 1985 to China valued at 365 million dollars. If propeller planes, combination cargo-passenger planes, and parts are included, the U.S. sold over 600 million dollars worth of aviation equipment to China. The establishment of six independent regional airlines which are allowed to compete with the State's airline, CAAC, should encourage continued growth in air transport.

## POLICY

The major channels for increasing transportation's output level are increased investment levels from central, regional, and individual sources. State policy is designed to promote that end in two dimensions: (1) direct investment in transport, and (2) reforms providing indirect incentives for investors through decentralization at lower levels. Under decentralization, provincial and local governments are given more responsibility to invest in public facilities such as roads and airports. At the same time, enterprises and individuals have more incentive to invest in private capacity, particularly in private trucks and buses. The state itself promises to invest heavily in transport in the next five years in order to increase rail capacity out of Shanxi and between major eastern cities, as well as to expand port capacities and develop some limited-access highways. State investment will probably continue to favor the rail sector. In 1984, 60 percent of the state's investment in transport and communications went to railways. While the total investment fund for 1985 is not yet known, investment in railways will reportedly be the highest in recent years at 7.4 billion yuan.

### Table 10-2
### CAPACITY GROWTH AND CAPITAL CONSTRUCTION IN TRANSPORTATION, 1981-1985

| (Item) | (Units) | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| Railroad Lines | (kilometers) | | 31 | 601 | 1,247 | 359 |
| Double Tracks | (kilometers) | . . . | . . . | . . . | 488 | 231 |
| Electrified Tracks | (kilometers) | . . . | . . . | . . . | 700 | 1,103 |
| Port Cargo Handling Capacity | (million tons) | 2.36 | 20.00 | 17.73 | 7.18 | 53.62 |
| State Capital Construction Investment | | | | | | |
| Total | (billion current yuan) | 44.29 | 55.55 | 59.41 | 74.32 | 106.10 |
| | (percent growth) | -20.8 | 25.4 | 6.9 | 25.1 | 42.8 |
| in Transport, Post, & Telecommunications | (billion current yuan) | 4.05 | 5.72 | 7.80 | 11.62 | 17.60 |
| | (percent growth) | -35.1 | 41.4 | 36.4 | 48.9 | 51.5 |
| Average Daily Haul of Freight Locomotives | (thousand ton-kilometers) | . . | 720 | 730 | 744 | 774 |
| | (percent growth) | . . . | . . . | 1.4 | 1.9 | 4.0 |
| Average Berthing Time for Ships | (days) | . . . | . . . | 9.9 | 8.7 | 11.1 |

SOURCES: China's State Statistical Bureau, **Statistical Yearbook of China**, various years. 1985 data from the March 1986 SSB communique on plan fulfillment.

China's commitment to maintaining and improving public infrastructure has varied since 1980 but currently appears strong. Table 10-2, above, presents available data on the expansion of transport capacity and transport investment since 1981. After a general slump in investment and additions to capacity in 1981-82, State investment in the entire communications and transportation sector increased 300 percent from 1982 to 1985. Similarly, expansion in rail and port capacity was dropped to almost nothing in 1981, but recovered again in 1983-84. Expansion of berthing capacity was particularly strong in 1985.

Investment growth is important for understanding the overall growth in transportation and freight presented in Table 10-1, above. Long-term expansion of transport capacity will require a steady commitment of large investment funds and possibly considerable amounts of foreign exchange. The foreign exchange requirement becomes particularly relevant when one considers China's technical needs for aircraft, fuel efficient vehicles, electronic control systems, and other elements of a modern transport system unavailable domestically given China's current level of technical development.

Rail and air transport investment remains almost entirely dominated by the central ministries. Responsibility for road investment, on the other hand, is shifting toward the end user. In May 1986, the State Council introduced a surcharge on motor vehicle purchases and increased highway maintenance fee collections; both are to go towards highway construction. Similar to the approach adopted by the government for railway development, official plans for highway construction emphasize the upgrading of existing roads over expansion with new highways. Also, construction is to focus on economically advanced areas, energy bases, Special Economic Zones, and ports, as opposed to the previous plan which expanded roads largely in mountain and border areas.

Freight rail transport expansion over the next five years (1986-90) is to be concentrated on upgrading the 16,000 kilometers of trunk lines in the northeast and coastal regions, with a planned investment of 70 billion yuan by the state. This level of investment is 80 percent higher than the total for the previous five years, from 1980 to 1985. Technological transformation will consist of double tracking, electrifying tracks, and computerizing operations and management. Previous five year plans placed more emphasis on expanding rail lines into relatively isolated regions of the country; the new plan appears much less ideologically oriented and much more pragmatic in terms of focusing funds on routes with greater economic returns. The second part of the program to increase rail transport capacity aims to increase production of locomotives and passenger trains. The Ministry of Railways hopes to be completely self-sufficient in locomotive production by the 1990s, with production increasing at least 70 percent and passenger train production increasing 120 percent. Within the plan period, the Ministry intends to open 4,600 kilometers of electric railways, 2,900 kilometers of double-track railways, and 3,500 kilometers of new lines.

Port facilities represent an additional investment need associated with both domestic economic growth and expanded international economic contact. Rapid growth in foreign trade, especially in the 14 coastal cities opened to foreign investment, is straining port facilities. China is addressing the problem by accelerating construction of both inland and coastal port facilities, and by various incentive and management reforms. State investment in port facilities aims to increase port capacity and to improve links with other modes of transport, especially high volume rail lines to the interior. Due to the upgrading completed in 1985, the handling capacity along the Yangtze River was 590 million tons, double that of 1984. In addition to state and local monies, the World Bank and Japanese Overseas Economic Corporation Fund are already contributing to port construction, and China is looking for other foreign funding sources. Along the Yangtze River, the State is building ten deepwater wharves at large ports for foreign trade.

A development strategy integrating different modes of transportation is being stressed for the ports which serve the inland regions, as opposed to Shanghai or Tianjin, which primarily serve nearby industrial production centers. For example, China has promised 870 million yuan over the next five years for the construction of 11 deep-sea berths in Lianyungang Port, Jiangsu Province, which has a direct railway line to Urumqi in Xinjiang province.

Management reforms were introduced on a trial basis in early 1985 when responsibility for managing the port of Tianjin was transferred from state control to the Tianjin municipal government. By February 1986, the test was considered successful. Tianjin had instituted a contract system with subordinate enterprises, had replaced one-third of the port's equipment, and had increased freight volume by 15 percent. The program has been expanded, and announcements early this year indicated that authority over the Shanghai and Dalian ports would be transferred to those cities' municipal administrations.

## PROBLEMS

There are two over-arching problems within the transport sector: inadequate levels of investment, and problems that are encountered while using, reforming, or trying to expand the transport network.

Major investments are needed to increase capacity so that the transport shortage will not constrain economic growth. In past years, investment in transport has averaged only 1.1 percent of GNP, which is low compared to other developing nations; Brazil, for example, spends 3.3 percent on transport. The planned scale of investment could double the current ratio.

Reforms and concurrent increases in prosperity have also created problems for transport. With increases in non-state traffic on roads and waterways, more accidents are being reported. Most notable of these accidents have been the sinking of several overloaded passenger boats, with several hundred fatalities. A Ministry of Communications report blamed the accidents on the high incidence of unlicensed boats and the use of boats in disrepair. Income rises have made travel more affordable to peasants, increasing the strain on trains which are carrying up to 150 percent of their seating capacity.

Administrative problems also hamper the development of highway transport. The recent decentralization of responsibility for road construction is not likely to improve the quality of roads, since many localities lack the funding that central authorities can employ. Funds collected as road maintenance fees are used for other purposes, and planning is inefficient because of the differing priorities of the agencies involved.

Inefficient use of existing capacity plagues the transport network. The level of on-site processing for both lumber and coal, which together account for 40 percent of freight traffic, is very low by international standards. It is estimated that raw logs require 35-40 percent more rolling stock than would sawn timber, leaving considerable room for savings. Likewise, while Japan and western European countries washed or screened over 85 percent of their coal in 1982, China processed only 18 percent. Thus, scarce transport facilities are squandered carrying ash, stones and other impurities to industrial destinations where they are useless.

Another example of the poor allocation of transport resources is excessive reliance on trains to handle inland distribution from seaports. Except for Shanghai's Huangpu River harbor, all harbors currently rely primarily on railways to distribute cargo. Railway transport accounts for more than 90 percent of distribution in the northernmost harbors, 60 percent in Qingdao, and 70 percent in Tianjin. Railway capacity is saturated, while many auto transport departments in the same areas have surplus capacity and lack cargo sources. Relieving backups at harbors, therefore, requires improving the inland distribution system by shifting toward road vehicles and upgrading access to the port cities.

China's 910,000 kilometers of highway are inadequate for the country's needs and are of poor quality. Urban traffic, particularly in large and medium-sized cities, is increasingly congested. Urban road construction cannot keep pace with the increasing number of vehicles. For example, since 1949 roads in Peking have increased 12.5 fold while the number of motor vehicles rose 65 fold and the number of bicycles 31 fold. In recent years the situation has been aggravated by agricultural trade markets and commercial outlets setting up shop on roadways. Possible solutions can cause other problems: a ban on trucks arriving from outside Peking in the spring of 1985 led to a severe vegetable shortage in the capital and the ban had to be lifted.

In densely populated areas, obtaining the rights-of way for new roads has proven to be a problem for the government. The ramifications of condemning arable land and adequately compensating farmers are examples of other obstacles hindering road construction. These problems and the lack of state investment have slowed the pace of road construction considerably over the past five years.

Another set of problems is associated with vehicles themselves. Present truck production levels cover renewal of the fleet on the basis of a ten year life cycle. As traffic increases, vehicles are kept longer, but domestic suppliers remain unable to provide the volume of vehicles demanded. This scarcity has lead to a rapid increase in vehicle imports. The increase in motor vehicles has exacerbated gasoline and diesel fuel shortages; the China National Petrochemical Corporation, SINOPEC, anticipates diesel demand for 1986 to be 4.7 million tons, and estimates that only 2 million tons can be supplied. Similarly, gasoline may fall short of demand by .5 to 1.5 million tons. The production of rolling stock and locomotives faces the same dilemma. In recent years, production has only been able to meet half the combined need for replacements and new additions. To supply short-term needs, imports may have to be considered for both rolling stock and locomotives until local production capacity can be increased.

## PROSPECTS

Prospects for transport suggest significant but not explosive growth by 1990 with total freight growing an average of 8-9 percent per year. With increasing per capita income, passenger transport will grow even faster than freight at an estimated 10 percent per year. The Ministry of Communications anticipates that by the year 1990 highway and waterway freight volume will be 1.82 billion tons, up from 836 million tons in 1984, implying an average annual growth rate of close to 14 percent. Transportation volume by rail for both passengers and cargo is expected to grow at only 4 or 5 percent per year over the next 15 years. Despite some potential rationalization, freight needs are expected to grow as fast as output in agriculture and industry. Hence, even if highway freight increases at a modest 12 percent, by the year 2000 the share of total highway transport (State and private) could increase to 20 percent of domestic ton-kilometers, up from 10 percent in 1984. In terms of traffic, the official Seventh Five Year plan calls for 15 percent annual growth for highways, and only 5.4 percent annual traffic growth overall. In sum, the transport system is expected to become slightly less concentrated in the rail sector during the next 15 years.

In light of stated highway traffic goals, existing roads are clearly insufficient and transport officials have announced an ambitious program of new road and highway construction. This includes plans to build 11 major roadways in the next five to six years in Shanghai, Nanjing, Shenyang, Dalian, Hangzhou, Ningbo, Qingdao, Lianyungang, Tianjin, Peking, Guangzhou, and Zhuhai. Completion will bring the total length of highways and 24-meter-wide first-class roads to 2000 kilometers, from almost none five years ago. In another project, a high-grade expressway will be built from Shenyang to Dalian, to be completed by 1990 with investment to total 2.02 billion yuan (300 million annually) starting in 1985. Officials estimate that this will decrease transport costs between these cities by 40 percent.

Success in increasing the share of road vehicle transport will require the availability of adequate fuel supplies. Supplies of liquid fuel are already very tight, and in some cases shortages are hampering the use of vehicles. Even with improvements in fuel efficiency, consumption in the year 2000 could be three to five times higher than in 1980, or 30-50 million tons. Prior to early 1986 the state gave priority to liquid fuel exports as a foreign exchange earner, emphasizing domestic substitution of coal for oil. Following the recent sharp decline in world oil prices this has changed; more crude is being diverted to domestic refineries for domestic consumption in the forms of heating and transport fuels. It is likely, however, that increasing levels of refined product imports will be required as domestic refining capacity falls behind rapidly increasing levels of demand for fuels.

Extensive development of China's waterways is planned for the next five years. Harbor traffic volume is projected to rise 61 percent by 1990 over 1985 levels, under the Seventh Five Year Plan. Construction of 120 deepwater berths and 36 medium and small berths is scheduled, bringing the total number of coastal harbor berths to 542 from the current total of roughly 390. Construction of port facilities will be focused on transport of energy-related materials and foreign trade commodities, including expansion of capacity for the transport of coal produced in the north to the south, and construction of berths for containerized liners. Container transport capacity should increase from 850 thousand to 1.3 million standard containers by 1990, according to official targets.

Prospects for the development of inland waterways are difficult to assess, because, unlike China's railways, development of waterways is under local (provincial) control rather than State control. Under the national plan for 1986 to 1990, however, development of ports along the Yangtze is a major state construction project. The river carries 80 percent of China's total inland water transport, and will be emphasized in China's effort to relieve the strain on the inland waterway system and make better use of existing waterways for transport. The State is constructing ten deep-water wharves for foreign trade along the Yangtze. Other plans include the development of ports in both the Yangtze river basin and Taihu Lake area, the addition of coal berths to four ports, and construction of 20 passenger wharves along the Yangtze. In all, 30 ports are to be built or expanded along the Yangtze and its tributaries.

In sum, the prospects for China's transport system look better than they have in recent years, given the level of resources invested and the variety of approaches involved. Coastal ports, inland foreign trade ports, rail lines near major coal deposits, and commercial aviation facilities are likely to show the greatest gains in the next five years given their current prominence in state investment and construction plans. Growth in roads and inland waterways is somewhat less assured because it depends to a greater extent on local and provincial initiatives to improve the infrastructure. Transport demand will certainly outpace supply, perpetuating intensive use of facilities in the short term.

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## CHAPTER ELEVEN - Population

### EXECUTIVE SUMMARY

| | |
|---|---|
| TRENDS | * Migration and definitional changes are speeding urbanization.<br>* Continuing state control over family structure is evident in the reduction in China's natural rate of population increase. |
| POLICY | * The state is implementing a national ID card system as a population control measure.<br>* Self-employment is encouraged as a method of reducing urban unemployment and under-employment. |
| PROBLEMS | * Controlling population growth will become increasingly difficult as reforms spread and individual freedoms increase.<br>* The labor force is aging rapidly and a comprehensive retirement system will be needed to support the growing number of elderly. |
| PROSPECTS | * The demand for larger families as individual prosperity increases will make slowing population growth difficult.<br>* The urban population could be 70 percent of the total by the year 2000. |

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### TRENDS

China's population growth rate, down to 11.23 per 1000 in 1985, is lower than that of most other Third World countries, but it must drop even further if economic gains are to have their planned significance. A rate of 10 per 1000 must be achieved and maintained if the government is to hold the population to 1.2 billion by the year 2000. Measures intended to thwart rural-urban migration have been implemented as China's population continues a rapid urbanization process, which includes the redefinition of villages and towns and the suburbanization of areas around the larger cities. A national ID card plan, aimed at preventing migration and controlling accelerating urbanization, is already being implemented in China's largest cities. The one-child policy, which will help China achieve its target population of 1.2 billion in the year 2000, will also accelerate the rise in the average age of the population. This will compel the State to devise a costly retirement system and an expanded health care program to support growing numbers of elderly people.

China's population at the end of 1985, based on a sample survey conducted that year, stood at 1.046 billion people--22 percent of total world population. This figure indicates a population growth rate in 1985 of 11.23 per 1000, marginally above the previous year's rate and only slightly higher than the goal of 10 per 1000 announced when the one-child policy was implemented in 1979. China's average annual population growth rate for the ten years from 1973 to 1983 was 15 per 1000; therefore, the 1985 population growth rate of 11.23 per 1000 indicates that the major trend in China's population is slower overall growth.

Some analysts have predicted that as incomes rise in China, especially rural incomes, the fertility rate will increase and raise the population growth rate closer to its previous high level. Yet, as incomes increased in 1984-5, the fertility rate increased only insignificantly. This is important because it shows the great success the Chinese have had in controlling the birth rate, which is much more volatile than the death rate and therefore the basic component of population growth.

When compared to population growth rates of other Third World nations listed in the table below, China's 1985 population growth rate of 11.23 per 1000 is significantly lower than both Kenya's (40 per 1000) and India's (23 per 1000). It is only slightly higher than the population growth rates of industrialized nations such as the United States (10 per 1000) and the Soviet Union (9 per 1000).

Table 11-1
WORLD POPULATION COMPARISON

| Country | Population 1983 (millions) | Average Annual Population Growth Rate 1973-1983 (per 1000) | Fertility Rate 1983 | Life Expectancy at Birth 1983 | Urban Population Share 1983 (percent) |
|---|---|---|---|---|---|
| China | 1019 | 15 | 2.3 | 67 | 21 |
| India | 733 | 23 | 4.8 | 55 | 24 |
| Brazil | 130 | 23 | 3.8 | 64 | 71 |
| Korea (South) | 40 | 16 | 2.7 | 67 | 62 |
| Indonesia | 156 | 23 | 4.3 | 54 | 24 |
| Kenya | 19 | 40 | 8.0 | 57 | 17 |
| Japan | 119 | 9 | 1.7 | 77 | 76 |
| United States | 234 | 10 | 1.8 | 75 | 74 |
| France | 55 | 4 | 1.8 | 75 | 80 |
| USSR | 273 | 9 | 2.4 | 69 | 65 |

SOURCE: **World Development Report**, The World Bank, July 1985, pp. 174-217.

Although China's population growth rate has been falling since 1981, it must reach the 10 per 1000 figure and remain there every year until 2000 if the goal of holding the population to 1.2 billion in that year is to be achieved. China's fertility rate of 2.3 children per woman is low compared to India's (4.8) and Brazil's (3.8), but still must drop below the replacement level of 2.1 children per woman if population growth is to continue to decline from now until the year 2000.

The present rural/urban population growth rate differential makes holding the overall growth rate to 10 per 1000 much more difficult. Since 1976, the urban growth rate has ranged from 6.5 to 13 per 1000 while the rural growth rate has ranged from 12 to 15 per 1000. In 1984, urban growth was 9.14 per 1000, but rural growth was 11.17 per 1000. Because the rural population of China in 1984 accounted for 68.1 percent of the total, the relatively high rural growth rate was a hindrance to the achievement of an overall growth rate of 10 per 1000. Continuing urbanization, planned and unplanned, is one factor that will contribute to reduction of the overall growth rate, but only reducing the higher rural growth rate will slow population growth significantly. Some success in this area is reflected in the fact that births during the Sixth Five Year Plan (1981-85) were 14 million below the established ceiling.

More significant than China's overall population growth rate, however, is the remarkable surge in urban population which began in 1979 and accelerated markedly in 1984-5. The urbanization that normally accompanies industrial development was long delayed by Maoist policies, but has now resumed due to recent economic and social reforms. Rapid urban population growth during the last few years is less a result of heavy rural-urban migration so common in other poor countries than of administrative changes: redefinition of rural counties as towns, and enlargement of traditional urban boundaries to include surrounding populations. Thus, rising urban population figures since 1981 are due in part to definitional changes. The state's encouragement of development outside of already overcrowded areas, and a broader, more realistic definition of "urban areas" (used for the first time during the 1982 national census) increased the number of officially defined cities from 245 in 1982 to 300 in 1984. During the same period, the number of counties fell from 2133 to 2069 when the State Council approved the redefinition and consolidation of numerous rural towns and counties into cities as they became more urbanized.

Table 11-2
RURAL-URBAN MIGRATION, 1971-1984

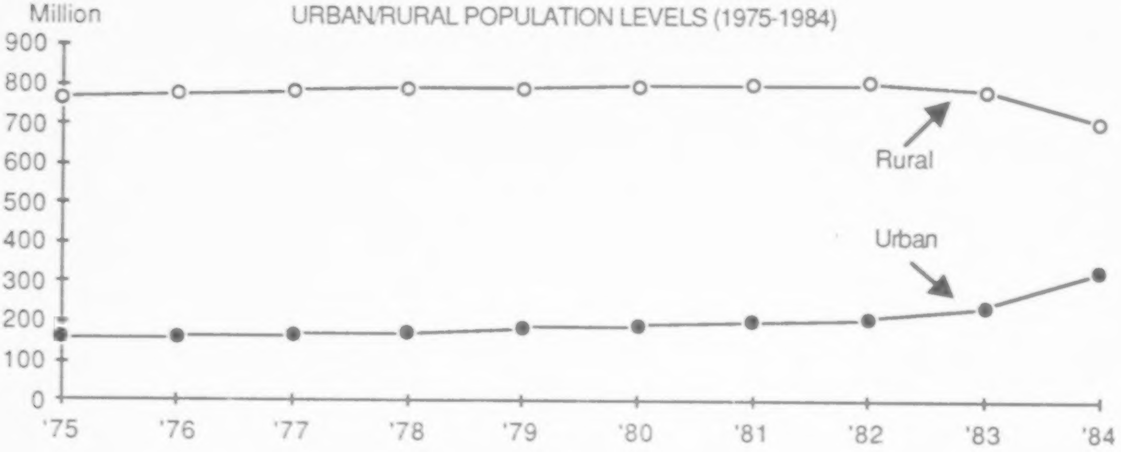
| | Population Growth | | | Apparent In-Migration | | |
|---|---|---|---|---|---|---|
| | Total | Urban | Rural | Urban | Rural | Statistical Discrepancy |
| (Percent) | | | | (Millions) | | |
| 1971 | 2.70 | 1.99 | 2.84 | .57 | 2.84 | 3.01 |
| 1972 | 2.29 | 1.52 | 2.44 | .18 | .84 | .59 |
| 1973 | 2.33 | 2.75 | 2.25 | 2.25 | .33 | 2.13 |
| 1974 | 1.85 | 1.63 | 1.89 | 1.08 | .24 | .89 |
| 1975 | 1.72 | 2.79 | 1.50 | 2.90 | -1.22 | 1.35 |
| 1976 | 1.40 | 1.94 | 1.29 | 2.06 | -.45 | 1.27 |
| 1977 | 1.34 | 2.01 | 1.20 | 1.99 | -.49 | 1.27 |
| 1978 | 1.35 | 3.46 | .91 | 4.35 | -2.69 | 1.45 |
| 1979 | 1.33 | 7.25 | .04 | 11.02 | -9.18 | 1.65 |
| 1980 | 1.19 | 3.66 | .66 | 4.84 | -4.58 | .05 |
| 1981 | 1.38 | 5.22 | .42 | 8.15 | -8.59 | -.69 |
| 1982 | 1.47 | 4.87 | .61 | 7.22 | -7.10 | .19 |
| 1983 | .94 | 14.05 | -2.51 | 27.59 | -29.99 | -2.18 |
| 1984 | .96 | 36.81 | -10.08 | 86.59 | -87.75 | -1.16 |
| (Millions) | | | | | | |
| 1985 | 1,046.39 | na | na | | | |

*NOTE: Apparent migration is calculated from birth and death rates. The statistical discrepancy between urban in-migration and rural out-migration estimates is due to inconsistencies in the official data themselves.

SOURCES: Official State Statistical Bureau data. (J5AD19.T5A, J5AD41.T5J)

The statistics in Table 11-2 provide a dramatic illustration of the urban population's extraordinary growth. The number of people living in cities and towns has grown much more rapidly than would have been the case without rural-urban migration and the creation of new urban areas. In 1983, 1984, and 1985 the population living outside cities and towns actually declined. Official data on births and deaths permit the calculation of apparent migration flows, and the shift in 1984, the last year for which migration data are available, affected nearly 90 million people. The data for recent years show that migration is increasing as rural dwellers take "temporary" jobs in cities to start new businesses, or to find jobs in the commerce, service and housing construction trades. The urban construction boom has caused a shortage of labor in the cities. Urban construction companies readily hire contract labor, drawing rural youths to the cities where they can earn higher wages than they otherwise would in the countryside.

Diagram 11-1



More than 3.2 million people have recently taken up temporary residence in China's 10 largest cities, accounting for over 10 percent of their total population. One survey in Peking reported that 75 percent of the "temporary" residents in one section of the city had already been living there for more than six months. A brief surge of 11 million new urban residents occurred in 1979 when, for a short time, there was some freedom to migrate. This 1979 movement has more than historical significance, however, because it may shed some light on the composition of the current rapid urban population increase and rural population decrease. There is much more freedom to migrate now than there was in 1979, in spite of official pronouncements to the contrary, and migration has had a greater role in current urban population growth than administrative redefinitions have had.

Movement to large cities has been discouraged and even punished. Many areas once classified as villages have been redefined as towns; in some instances, whole counties have been given urban status, and existing cities and towns have expanded their borders. Even though the State Statistical Bureau reports that the sharp increase in urban population is due primarily to the "many newly-established towns resulting from readjustment in the criteria for determining urban towns," personal observation, reports from various

Chinese sources, and 1979 data all indicate that much of the urbanization is substantive and implies important lifestyle changes. Whatever the rural-urban population mix is at this point, the statement that "China is 80 percent rural" can no longer be tossed out as a quick and easy characterization of China's population. Prospects are good that within at least five years, more than half of China's population will be living in urban areas.

There have been indications that the one-child per family policy is being relaxed in some cases and in some areas. Although some relaxation is officially sanctioned, some is also due to local family planning officials, who reason that recent strong economic growth obviates the need to restrict couples to one child, slackenening their enforcement of the unpopular policy. However, in Guangdong--a bellwether region with regard to social and economic policies--the local government recently announced that urban couples may have second children under certain conditions that relate to the first child's physical condition, the parents' previous marital status, or their current employment status. Rural couples may now apply for permission to have a second child, which may be granted if they meet the conditions imposed on urban couples or if their first child was a girl. By imposing a restriction that the second child must be spaced at least four years after the first, authorities are implementing recommendations of population experts who indicate that such birth spacing can be as effective as a one child policy in controlling population growth.

The number of elderly persons (over 65) in the total population has grown dramatically. Chinese demographers forecast that there will be a continual rise in the percentage of elderly during the next 15 years, reaching 7.2 percent of the total by the year 2000. In 1982, Japan and the United States had proportions of 9 and 11 percent respectively; however, aging of the Chinese population as a whole will occur much more rapidly that it did in the developed world. By 2038, demographers predict that the proportion of elderly could reach 20 percent if present growth continues. In the heavily populated east and south coastal regions, the proportion of elderly people now exceeds the national average.

Post-reform China is now following the development pattern of national economies known as "early industrializers." The historical experience of such economies shows a progression from an economy dominated by agricultural employment to one dominated by manufacturing employment. In China, the growth of rural village industry (48 percent in 1984) shows that the transition of labor from the agricultural sector to the manufacturing sector is already underway. As rural residents establish transportation, commercial, and repair services, labor will also shift out of agriculture and into the service sector.

A notable increase in the number of self-employed persons is indicative of China's transformation from a centrally planned command economy to a decentralized economy depending on individual incentives and profit motives. In 1984, there were almost 3 million self-employed workers in cities and towns, roughly 30 percent more than there were in 1983. The number of self-employed workers will continue to rise as the state allows more private enterprise and exhorts the people to "get rich."

Regional differences in sectoral employment are expected to become more pronounced as certain areas develop faster than others. Currently, a lower percentage of the work force is employed in agriculture in the coastal and industrial regions than is employed in agriculture in the less-developed interior. Although there have been reports in the Chinese press stating that development priority should be given to the western provinces, especially Xinjiang, development efforts there have been largely political. The recent decision to de-emphasize development in all but the four largest of the fourteen coastal cities shows that it is the traditionally most successful coastal regions that have been targeted for foreign investment, technical progress, and rapid development.

## POLICY

China has implemented policies to control population growth, restrict migration to the cities, create jobs for all who are employable, and avoid unemployment in the politically sensitive urban areas. As the Maoist system of ration coupons and state employment loses significance, the recently-announced national ID card plan will allow China to maintain and strengthen its control of the population's movements and activities.

In the Seventh Five Year Plan document released in April 1986, the State outlined its population-related goals for the five years from 1986-90. Among these goals are: 1) holding the total population to 1.113 billion; 2) continuing the family planning program; 3) preventing rural-urban migration by encouraging the peasants to "leave the land but not the village" by developing township enterprises to absorb excess rural labor; 4) encouraging collective and individual production and developing tertiary industry; 5) achieving full employment in cities and towns; and 6) establishing a social security system to care for the growing number of elderly. The Chinese have made inroads in all of these areas, but the one-child policy continues to receive the most national and international attention.

China's ambitious population control plan, under which every couple would be allowed to have only one child, was announced in 1979. The one-child policy was actually only one part of a three part policy which included late marriage and late childbearing provisions. It was intended to be a temporary restriction on family size, allowing the state to slow population growth which, if unchecked, would threaten to negate planned economic gains. This policy was followed by the promulgation of the Marriage Law of 1980, which stipulated marriage ages and required every couple to practice birth control. In April 1984, Document 7, not released to the public, reaffirmed the importance of family planning and the one child policy. It also set broad guidelines for tailoring population control policies to local conditions, indicating some permissiveness in certain situations. In practice, adherence to the birth control policy varies widely because the financial rewards for having only one child differ according to the wealth of the couple's work unit. Incentives for enforcing such an unpopular policy are evidently not uniform.

China's Vice Premier Wan Li recently indicated that population policies would have to take into account differences between rural and urban areas, as well as differences among rural areas themselves. In order to prevent the mass unemployment that would result if the one child policy were to be relaxed, he reiterated the need to pursue family planning even now that the economy is exhibiting strong and steady growth. In an attempt to answer accusations of coercive practices in population planning, the Vice Premier also urged those involved in family planning "to overcome compulsory and coercive conduct and not to harm the peoples' interests."

The one child policy's goals have not changed, but its strict enforcement contradicts another fundamental long-term goal: a future population that has a balanced age structure and a stable labor force composition. Over-zealous population control now will cause a shortage of young workers in the future.

Chinese and Japanese population experts under a United Nations-sponsored research project have concluded that China should readjust its one child policy after the year 2000 in order to prevent a labor shortage and an unusually high proportion of elderly in the total population. In Shanghai the proportion of elderly stands at 14 percent, and is placing a heavy economic burden on former employers. Between 1978 and 1984, Shanghai's pension bill tripled and now accounts for nearly 25 percent of the total wage bill. In addition, city authorities have estimated that each year 76,000 workers retire and are replaced by only 55,000 new ones. Shanghai estimates that it will have trouble renewing its workforce from now until the year 2000.

In order to cap population at 1.2 billion by the year 2000, Chinese demographers realize that it would be necessary to hold the annual population growth rate to 10 per 1000 for the last 20 years of this century. This would require holding the fertility level below the replacement level of 2.1 children per woman for many of those years. The one-child policy was designed to reduce fertility quickly and dramatically so that overall population growth could be centrally controlled. Even though overall population growth has slowed, China's fertility rate was still above replacement level in both 1982 and 1983 at 2.3 children per woman.

The one-child policy could enable China to reach its population goal of 1.2 billion people in the year 2000; however, even the low growth rate of 10 per 1000 required to meet that goal is still considered too high by some Chinese demographers. Some have advocated an "optimum" population of 700 million, which would require a negative growth rate for many years. The result of such a policy would have an even more dramatic and negative impact on China's age distribution than the one-child policy or the current low growth rate.

Recent agricultural reforms have intensified rural resistance to the one child policy. The reforms gave peasants "private plots" and the freedom to sell surplus produce in free markets. As a result, rural families had an even greater incentive to have more family members working their plots, and they found ways to evade the State's one child policy. (Some reports indicated that even rural cadres, who were and still are in charge of enforcing the one child policy, were having larger families to help farm their own private plots.) As a result of conflicting incentives, then, rural residents have resisted the implementation of the one-child policy as their standard of living has risen. This situation has created the potential for explosive population growth, because both the rural birth rate and rural population are already much higher than the urban birth rate and population. The government has addressed this problem by stepping up urbanization, by definitional or boundary changes, by tacitly allowing "sent-down" persons to return to the city (in some cases creating jobs for them), and by adjusting marriage age restrictions.

In an effort to control migration to existing urban centers, the State has devised a national identification card system that met with success in a pilot project in Beijing. It is now being implemented in the larger cities. One of the stated goals of the national ID card program is to ensure "the management of population with modern technology." Currently, each household has a "record of domicile" registration which can only be used locally to prove residency. The national ID card will allow the central government to restrict illegal migration of rural families and individuals to urban areas by recording each person's residence on a nationally recognized card.

For the past 20 years, China's population has been urbanizing despite statistics that have indicated only very slow growth of the urban population. This under-reporting of the urban population was mainly due to unrealistic definitions of "urban areas" which failed to include densely populated regions just outside city boundaries as part of metropolitan areas. By the early 1980s, though, suburban and rural areas that had become increasingly urbanized, especially rural districts close to cities and towns, were redefined as urban areas themselves. The redefinitions caused urban population figures to be revised upward as far back as 1965. A different type of redefinition is now occurring throughout China's countryside. During the past few years, the State Council has been approving the consolidation of many rural counties and towns into cities. The effect of this policy has been to increase the urban population on paper and to bring the reported urban population figure closer to the true urban population, which is increasing even more rapidly as a result of the economic reforms.

## PROBLEMS

Controlling the growth of a population already in excess of 1 billion people creates a host of problems, including the possibility that such a huge population cannot be controlled. Chinese officials have already shown that they are determined to slow population growth, and they have produced remarkable results. In the face of rapid economic and social change, policymakers will have to address the population's changing age structure, the composition of the labor force, and the prospect of a society with a great number of only children.

Planners will have to counter the efforts of couples who desperately want more than one child, and who have found loopholes in the one child policy. (For example, there have been reports of workers gaining temporary employment outside their registered residence and giving birth to additional children while away from home.) Reported incidents of female infanticide, enforced sterilizations, and enforced abortions have also damaged the reputation of China's population policy both domestically and internationally.

Even if the one-child policy were to be relaxed soon, the rising average age of the population will lead to serious problems in the areas of health care, retirement benefits, and labor force composition throughout the next several decades. There is already concern that the proportion of elderly dependents in the population will temporarily bulge above its ultimate long-term level. Chinese demographers say that the one-child policy could cause that proportion to reach one third of the total population within 50 years. Yet, there is official encouragement for self-reliance in family care for the elderly, in direct conflict with the one-child policy now in effect. The government has assured parents of only children that there will be a retirement system in place by the time they need it, but it is difficult to see how China could fund a retirement system given the present unfavorable demographic situation. Many Chinese already fear that the typical family of the future will consist of a single child, two working-age parents, and four grandparents, all supported by the two family workers.

The one child policy threatens to alter dramatically the structure and productivity of the nation's labor force well into the next century if it is enforced much longer. The long-term effect of such a policy could be a shrinking labor force that would, in turn, imperil the modernization program. Prolonged low fertility could cause a rise in the average age of the labor force and create shortages of younger, better and more recently trained, more adaptable workers. Not only would the labor force become older and less adaptable to change, but the vast number of new retirees would also have to be supported by fewer, yet supposedly more productive, young workers. It is questionable whether such a situation is possible given China's current education and training system. In late July, it was reported that only primary schooling was universal in Peking but that by 1990 all of the city's children should receive a senior middle school education. One result of such an inadequate education system is an illiteracy rate in 1982 of 32 percent of the population over 12 years of age.

Other undesirable side effects of the one child policy include the widespread occurrence of behavioral problems of a growing number of only children, the destruction of time-honored ancestral lines, and the possibility that miracle economic growth may be precluded by the inability of the Chinese family to realize the economic benefits of vertical extension.

The problems of creating enough jobs for surplus rural labor and of maintaining low urban unemployment are the major employment problems that Chinese planners will be facing as a result of otherwise advantageous population and economic policies. According to Zhao Dongwan, Minister of Labor and Personnel, China will have to create 45 million urban jobs during the Seventh Five Year Plan period -- 10 million more jobs than were created during the Sixth Five Year Plan period. Of the 45 million jobs that will have to be created, 30 million will be for newcomers to the job market and 15 million will be for workers released by State-owned enterprises over the next five years. Although the government has adopted strict new measures to prevent a continuing influx of surplus rural labor into the cities, an estimated 100 million rural farmers may pursue jobs other than farming during the next five years. The State Minister of Labor and Personnel also stated that the key to finding or creating enough productive jobs in order to keep the unemployment rate low lies in reforming the employment system and in pooling the efforts of the State and collective and individual enterprises. He added that the collective, individual, and service trade industries should be actively encouraged to create more jobs.

Statistics show that the urban unemployment rate dropped from 4.9% in 1980 to 1.8% in 1985, but the rates do not accurately reflect real unemployment. This is due to the fact that China enforces a rather strict segregation between the urban and non-urban segments of the population. Because only registered urban persons are eligible for urban state jobs and benefits, only they are counted as "waiting" for employment. The urban unemployment rate is further distorted by the large number of workers officially attached to "production units" which have little, if any, productive work to do.

New economic freedoms and improvements in transportation have made it possible for peasants to live in urban areas despite strict restrictions prohibiting migration to the cities in order to seek permanent residence. An increasing number of peasants, whether or not they constitute surplus rural labor, do find temporary urban employment as urban enterprises increasingly hire lower paid contract workers from the countryside. However, these workers do not receive the benefits that registered urban workers do, and they have no job protection. If they lose their jobs, they are not counted as unemployed and are expected to find their way back into the rural labor force, which is essentially left to its own devices, especially since the abolition of communes. In order for the state to prohibit migration and limit the growth of existing urban centers, it will have to carefully monitor housing or enforce draconian check systems like South Africa's. Urbanization will probably be more rapid than Chinese planners foresee.

## PROSPECTS

China's total population is likely to exceed the target of 1.2 billion in the year 2000, given relatively high rural population growth and the low likelihood that the overall population growth rate of 10 per 1000 can be reached immediately and maintained for the next 15 years. Although rural population growth fell from 15 per 1000 in 1981 to 12.2 per 1000 in 1983, further reductions may be difficult to achieve in the face of reforms that unintentionally create the demand for more family members in the countryside.

As a result of reforms already underway, the urban population could reach 70 percent of the total population by the year 2000, up from 31.9 percent in 1984. And in spite of policies which prohibit migration, Chinese officials expect that more than one third of the urban population in the year 2000 will have migrated from the countryside. Relaxation of urban employment and marketing practices will be responsible for some of the migration. In addition, some of the growth of the urban population will be due to suburbanization, the redefinition of dense rural areas as urban areas, and the creation of smaller cities and towns in the countryside where excess rural laborers will find non-agricultural employment. Already, one fifth to one third of the industrial production in Shanghai and Tianjin occurs in suburban districts.

As the one child policy is continued and smaller families are advocated, it can be expected that the proportion of elderly will eventually rise to 20 percent of the total population from today's 5 percent. Before that takes place, however, the state will have to establish some sort of social security system to allay the fears of parents of only children. The number of non-working people supported by every 100 workers is expected to decline slightly over the next 50 years from 63 to 58. However, whereas the number of children supported is expected to halve during that period, the number of elderly is expected to increase four fold. The cost of such support would be staggering. The state's current health care system will have to be upgraded and expanded just to handle the large number of older persons, which could reach 240 million by the year 2000.

Social attitudes will change even more rapidly as the population grows and the economy modernizes. The traditional idea of submission to authority may already be changing in some one-child families as only children are given the best the family and the State have to offer. China's political system may have to yield to the demands of a population and workforce accustomed to the largest degree of individual freedom allowed in China since the founding of the People's Republic in 1949. Only children could become the type of people least adaptable to life under a political system that demands conformity, ideological purity, and self-sacrifice for collective welfare.

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